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**APPLICATION OF**

**CPV CUNNINGHAM CREEK LLC**

**CASE NO. PUE-2001-00477**

**For approval of a certificate of public convenience and necessity pursuant to Va. Code § 56-265.2, for an exemption from Chapter 10 of Title 56, and for the interim authority to make financial expenditures**

**REPORT OF DEBORAH V. ELLENBERG, CHIEF HEARING EXAMINER**

**August 7, 2002**

**I. INTRODUCTION AND HISTORY OF THE CASE**

On August 31, 2001, CPV Cunningham Creek LLC (“CPV”) filed an Application with supporting testimony and exhibits requesting that the State Corporation Commission (“SCC” or the “Commission”) grant CPV a certificate of public convenience and necessity (“CPCN”) pursuant to § 56-265.2 of the Code of Virginia (the “Code”) for a new electric generating facility (the “Facility”) to be located in Fluvanna County, Virginia (the “County”). CPV proposes to construct, own, and operate the combined-cycle natural gas-fired Facility, which would consist of two combustion turbines, two supplemental-fired heat recovery steam generators, and a steam turbine. The Facility would have a nominal capacity rating of 520 MW and would be capable of operating year-round as a base load generator. In addition, CPV sought an exemption from the provisions of Chapter 10 of Title 56 and interim approval to make financial expenditures and undertake preliminary construction, pursuant to § 56-234.3 of the Code.

On September 25, 2001, the Commission entered an Order for Notice and Hearing requiring CPV to provide public notice of its Application, establishing a procedural schedule for the filing of testimony and exhibits, and scheduling an evidentiary hearing for January 9, 2002 (the “Initial Hearing”). For reasons described below, I remanded the case following the Initial Hearing to receive additional evidence on limited issues raised by public witnesses. The hearing to receive the supplemental evidence (“Remand Hearing”) was held on April 23-24, 2002.

Shortly thereafter, the Commission remanded several cases to receive additional evidence on, among other things, ownership and control of a proposed project. Since public witnesses had questioned the intended ownership and control of the CPV Cunningham Creek project at the April 23 hearing, CPV sought permission to further supplement this record to address that specific issue. CPV’s motion was granted by ruling dated May 17, 2002. Two public witnesses who had testified at the hearing subsequently requested a third public hearing so that they could have an opportunity to comment on the additional supplemental evidence filed by CPV. I did not convene such a hearing. Indeed, the additional information was filed to fully address issues

raised by public witnesses, and neither Staff nor Columbia sought an opportunity to cross-examine CPV's witnesses on that testimony. Yet another hearing was therefore not necessary.

Finally, counsel for CPV and the Commission Staff submitted a joint summary of the record in this proceeding. I have reviewed and edited that summary, and find that it accurately sets forth the pertinent facts necessary for the Commission to render a decision on this case.

## **II. THE INITIAL HEARING**

The Initial Hearing was convened as scheduled on January 9, 2002. James R. Barrett, George D. Cannon, Jr., and Cassandra Sturkie, Esquires, appeared on behalf of CPV. Allison L. Held, Esquire, and William H. Chambliss, Esquire, appeared on behalf of the Commission's Divisions of Energy Regulation and Economics and Finance. Columbia Gas of Virginia, Inc. ("Columbia Gas") had filed a notice of participation as a respondent on October 3, 2001. M. Renae Carter, Esquire, appeared on behalf of Columbia Gas and presented a Stipulation dated January 7, 2001, to which the parties had agreed.<sup>1</sup> Because counsel for CPV, the Staff, and Columbia had reached agreement on all issues pertaining to the Application, they stipulated that the prefiled testimony and evidence would be entered into the record without subjecting the witnesses to cross-examination.<sup>2</sup>

### **A. Testimony And Evidence**

#### **1. *CPV's Prefiled Direct Testimony***

CPV presented the prefiled testimony of Chris Broemmelsiek, CPV's vice president for project development; and Glenn Harkness, senior vice president for TRC Environmental Corporation ("TRC") and principal-in-charge on the environmental and technical features of the Facility.<sup>3</sup> The testimonies of Mr. Broemmelsiek and Mr. Harkness are summarized below.

##### **a. Broemmelsiek Direct Testimony**

Mr. Broemmelsiek's prefiled testimony provided details on the technical characteristics of the Facility, the site on which the Facility will be located, the Facility's proposed utility interconnection, CPV's corporate structure, the proposed financing for the Facility, and the reasons why CPV decided to locate the Facility in Virginia.

*Technical Characteristics Of The Facility.* Mr. Broemmelsiek testified that the Facility will be a 520 MW, combined-cycle electric generating facility that uses natural gas for fuel. He explained that the Facility will use state-of-the-art combined-cycle power generation technology

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<sup>1</sup>The Stipulation was designated as Ex. 10. It recognizes that CPV will construct and own a natural gas lateral from the Transcontinental Gas Pipe Line Corporation's ("Transco") natural gas transmission line located on the site of the proposed Facility, and that the natural gas lateral will be used solely to provide natural gas to the Facility.

<sup>2</sup>CPV's Application and exhibits were designated as Ex. CPV-1.

<sup>3</sup>The prefiled direct testimonies of Chris Broemmelsiek and Glenn Harkness were designated as Exs. CB-2 and GH-4, respectively.

and air pollution control systems, and described how these technologies work. He asserted that the Facility will achieve an operational efficiency on a unit of energy output per unit of energy input basis that is greater than the operational efficiency for older plants.<sup>4</sup>

Facility Site. Mr. Broemmelsiek stated that CPV has an option on approximately 388 acres of land in three parcels on Route 636, about three-quarters of a mile west of its intersection with Route 53. He testified that the site is located at the intersection of utilities necessary for the operation of the Facility and the transmission of the electricity that the Facility will generate. Mr. Broemmelsiek also explained that because the entire area of development will occupy approximately 10% of the site, at least 90% of the site will remain an undisturbed, primarily wooded space.<sup>5</sup>

Utility Interconnections. Mr. Broemmelsiek testified that the Facility will interconnect with Virginia Electric and Power Company's ("Dominion Virginia Power") 230 kV Bremono-Charlottesville #2028 line, which is located on the Facility's proposed site. Electrical connection lines and bus towers will be necessary to connect to the existing Dominion Virginia Power line. Mr. Broemmelsiek testified that Dominion Virginia Power has completed a Generation Interconnection Evaluation Study, which determined that the proposed interconnection will have no impact on the reliability of Dominion Virginia Power's system.

Mr. Broemmelsiek further testified that the Facility will interconnect on-site with an interstate natural gas pipeline owned by Transco. He stated that Transco intends to construct an interconnection between its mainline system and certain pipeline facilities of Cove Point LNG Limited Partnership (the "LNG Interconnection") in Fairfax County, Virginia, and that Transco will provide year-round firm backhaul transportation service of up to 90,000 dt/day from the LNG Interconnection to a new delivery point on Transco's mainline for the Facility.<sup>6</sup>

Corporate Structure. Mr. Broemmelsiek stated that CPV, which is a Maryland-based company established for the purpose of developing the Facility, is a direct, wholly owned subsidiary of CPV Cunningham Creek, Inc., ("Cunningham Creek Inc.") which, in turn, is a direct, wholly owned subsidiary of Competitive Power Ventures Holdings, LLC ("CPV Holdings"). CPV has no affiliation with any utility in Virginia. Mr. Broemmelsiek explained that Competitive Power Ventures, Inc. ("CPV Inc."), another direct, wholly owned subsidiary of CPV Holdings, is in the business of developing, through affiliated development companies such as CPV, high-efficiency, environmentally desirable power projects throughout the United States and Canada.<sup>7</sup>

Financing Options. Mr. Broemmelsiek testified as to the proposed financing for the Facility.<sup>8</sup> As described by Mr. Broemmelsiek, CPV Inc. plans to obtain approximately 40-50% of

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<sup>4</sup>Ex. CB-2, at 2-3.

<sup>5</sup>*Id.* at 3-4.

<sup>6</sup>*Id.* at 4-5.

<sup>7</sup>*Id.* at 5-6.

<sup>8</sup>CPV initially designated the information related to its proposed financing of the Facility as confidential; however, CPV filed this information in unredacted form in subsequent testimony.

the project capitalization from debt that is secured by the Facility, and will obtain the additional financing through various means.

Other Development Projects. Mr. Broemmelsiek explained that CPV Inc. and its affiliated project development companies are currently involved in five electric generating projects in Florida. He also stated that members of CPV Inc.'s management team have had many years of experience in developing power plants in the United States.<sup>9</sup>

Virginia As The Location For The Facility. Mr. Broemmelsiek testified that CPV Inc. chose to develop an electric generating facility in Virginia because the market in the southeastern United States (which includes Virginia) has one of the country's largest needs for new generation capacity. Mr. Broemmelsiek stated that unless electricity supply in Virginia can keep pace with the growing consumer demand, energy prices will rise and system reliability could be jeopardized.<sup>10</sup>

b. Harkness Direct Testimony

Mr. Harkness's prefiled testimony addressed CPV's efforts to mitigate environmental impacts from the Facility. Mr. Harkness introduced CPV's Environmental Report ("ER"), which includes a detailed discussion of the Facility's environmental considerations; the permits and certifications required by federal, state, and local law; and CPV's reports and investigations on water use, noise, traffic, visibility, historic resources, and natural heritage resources.<sup>11</sup> The key environmental considerations are described below:

Proposed Site. Mr. Harkness testified that the proposed site for the Facility encompasses approximately 388 acres of land in three contiguous parcels on Route 636 in Fluvanna County. Mr. Harkness testified that CPV has an option to purchase the three parcels. CPV intends to construct the Facility on approximately 10% of the site acreage.<sup>12</sup>

Mr. Harkness believes the proposed site is suitable for the Facility due to certain physical characteristics that afford minimal adverse impacts to environmental resources. The site has existing natural gas pipelines and electric transmission lines; few residential neighbors; a cleared hayfield within the interior of the site that will serve as the Facility's construction footprint; and an extensive natural vegetative buffer that will comprise approximately 90% of the site and fully surround the Facility.<sup>13</sup> Because the site has only minor bordering wetlands on its perimeter that will not be disturbed by construction or operation of the Facility, CPV will not be required to obtain a wetlands permit from the U.S. Army Corps of Engineers or the Virginia Department of Environmental Quality ("DEQ").

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<sup>9</sup>Ex. CB-2., at 8-10.

<sup>10</sup>*Id.* at 10-11.

<sup>11</sup>Mr. Harkness testified that CPV is required to obtain several environmental permits or certifications, in addition to the air permits described below and the Commission's approval in this proceeding. The Application (Ex. CPV-1 at page 30) includes a list of those permits and certifications, as well as the status of approval for each one.

<sup>12</sup>Ex. GH-4, at 2-3.

<sup>13</sup>*Id.*

Local Approval. Mr. Harkness testified that CPV obtained a Special Use Permit (“SUP”) to construct the Facility on the proposed site from the Fluvanna County Board of Directors on July 18, 2001. The SUP, attached as Exhibit 3 to Mr. Harkness’s prefiled testimony, includes 34 conditions designed to mitigate environmental and local impacts from the construction and operation of the Facility. For example, the SUP prohibits CPV from using oil as a backup fuel and requires CPV to restrict permanently the vast majority of the site from future development, by placing it in a conservation easement.<sup>14</sup>

Mr. Harkness stated that, as a condition of the SUP, CPV will contribute funds to the Fluvanna County Special Capital Improvement and Debt Service Fund totaling \$18 million during the first 30 years of the Facility’s construction and operation. To ensure that the Facility does not adversely impact the rural character of the County, the funds must be earmarked to: (i) maintain open space and agricultural areas, (ii) protect and enhance water and air quality, (iii) ensure that traffic near the Facility will not impede or overburden local roadways, and (iv) ensure that the County’s emergency services are capable of responding to any emergency situation at the Facility.<sup>15</sup>

Visual Aesthetics. Mr. Harkness testified that the Facility’s natural vegetative buffer will exceed the minimum 300-foot buffer required for electric generation facilities under § 22-17-16(3)(9e) of the Fluvanna County Code. The buffer will be maintained as an undeveloped, primarily wooded space, meaning that it will screen the Facility, both visually and acoustically, from surrounding properties for the life of the Facility. CPV’s viewshed analysis demonstrated that only a small portion of the tops of the Facility’s stacks will be visible from discrete locations.<sup>16</sup>

Minimal Impacts To The Lake Monticello Development. Mr. Harkness testified that the Facility’s site location and design features will minimize disturbances to the Facility’s neighbors, including residents of the Lake Monticello community. The Facility will not be seen or heard by nearby residents, and the Facility’s eight to ten employees will not burden local roadways in their daily commute to the Facility. Further, the Facility will utilize the best available control technology (“BACT”) to minimize air emissions.<sup>17</sup>

Air Quality And Permitting. Mr. Harkness testified that the Facility’s two turbines will be powered exclusively using clean natural gas. To minimize air emissions, CPV will install BACT and a Selective Catalytic Reduction (“SCR”) system. CPV voluntarily will install a carbon monoxide (“CO”) catalyst to greatly reduce CO emissions. Mr. Harkness testified that CPV’s technology will reduce emissions of nitrogen oxides (“NO<sub>x</sub>”) from the Facility to less than 3.5 parts per million (“ppm”).<sup>18</sup>

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<sup>14</sup> *Id.* at 7-9. The conditions attached to the SUP are listed in Ex. 5 to Mr. Harkness’s testimony.

<sup>15</sup> *Id.* at 9-10 and Attachment 4.

<sup>16</sup> *Id.*

<sup>17</sup> *Id.* at 4.

<sup>18</sup> *Id.* at 5. Following submission of the Application, CPV agreed to additional measures that will reduce emissions of NO<sub>x</sub> from the Facility to less than 2.5 ppm.

Mr. Harkness testified that CPV submitted to DEQ an application for a Prevention of Significant Deterioration (“PSD”) air permit on August 16, 2001. Additionally, CPV will be required to obtain an acid rain (Title IV) permit and an air operating (Title V) permit prior to the Facility’s startup.<sup>19</sup>

Mr. Harkness testified that federal and state laws require a cumulative air quality impact assessment to be conducted under some circumstances when a new electric generating facility is built. Here, CPV’s air quality impact assessment (submitted to DEQ with the PSD air permit application) indicated that the proposed Facility individually will not cause a significant adverse impact on air quality, and thus a cumulative impact analysis was not required by the DEQ.<sup>20</sup> Because gas-fired power plants are energy efficient and produce significantly less NO<sub>x</sub>, SO<sub>2</sub>, and particulate matter emissions than coal-fired plants, Mr. Harkness testified that he believes operation of the Facility should help the Commonwealth to gradually displace higher-emitting coal-fired power plants with clean, efficient natural gas operations. For this reason, Mr. Harkness believes that the Facility should confer a net benefit to the environment by reducing overall power plant emissions in Fluvanna County and the surrounding area.<sup>21</sup>

Water Usage. Mr. Harkness testified that CPV will install an air-cooled condenser (“ACC”) to greatly reduce the amount of water needed to operate the Facility. According to Mr. Harkness, air-cooling technology requires far less water than standard water-cooling technology, which will minimize demand on local water resources. CPV’s Facility will require a maximum of 90,800 gallons of water per day, as compared to the five to six million gallons of water per day required by a comparable water-cooled facility. CPV will consume approximately 29,000 gallons on average and return approximately 62,000 gallons per day to the water treatment facility. Mr. Harkness testified that use of the ACC eliminates both the visible plumes produced by water-cooled systems and the need to construct miles of pipeline between the Facility and a surface water source.<sup>22</sup>

Because a private water supplier will satisfy the Facility’s water needs and accept wastewater from the Facility, Mr. Harkness testified that CPV will not be required to obtain water withdrawal permits or wastewater discharge permits. For the same reason, no groundwater withdrawals will be made for power generation purposes.<sup>23</sup>

Noise. After conducting a noise analysis, CPV agreed as a condition of the SUP that the noise levels attributable to the Facility’s operations will not exceed 50 decibels (“dBA”) at the Facility’s property boundaries. Mr. Harkness testified that 50 dBA is less than the volume of a normal conversation.<sup>24</sup>

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<sup>19</sup>*Id.* at 4. The Facility’s potential air emissions are described in detail in the PSD air permit application, attached as Appendix B to the ER.

<sup>20</sup>Ex. GH-4, at 6-7.

<sup>21</sup>*Id.* at 4-7.

<sup>22</sup>*Id.* at 11.

<sup>23</sup>*Id.* The Facility’s ACC and water usage considerations are described in detail in § 5.0 of the ER, attached as Ex. 2 to Mr. Harkness’s testimony.

<sup>24</sup>Ex. GH-4, at 11-12.

Traffic. A traffic analysis conducted for CPV demonstrated that the Facility will not create or exacerbate traffic congestion in the locale surrounding the site. Mr. Harkness testified that improvements to the existing roads will not be required, except for temporary traffic controls that could be required to accommodate deliveries of heavy equipment during the construction phase of the Facility.<sup>25</sup>

Lighting. Mr. Harkness testified that CPV will install perimeter lighting and lighting for some of the Facility's equipment, as required by law. The lighting will be directed downward and inward to minimize levels of light visible from surrounding properties. Mr. Harkness testified that the light at the Facility's property boundaries will be less than 0.5 foot-candles.<sup>26</sup>

Historic Resources. Mr. Harkness testified that a Phase I Archaeological and Architectural Assessment conducted at the Facility's proposed site found that: (i) no archaeological resources are present on or within two miles of the site, and (ii) no resources listed on the National Register of Historic Places ("NRHP") are located on or near the site. The Bragg House and Cemetery (comprised of four Civil War-era graves) are located within the 388-acre site, but outside of the construction footprint. CPV's consultant concluded that the Bragg House and Cemetery are not eligible for listing on the NRHP but, in any event, they will not be disturbed by construction or operation of the Facility.<sup>27</sup>

Natural Heritage Resources. Mr. Harkness testified that CPV asked the Virginia Department of Conservation and Recreation's Division of Natural Heritage ("DCR") to conduct a data research and project review of the Facility's site. The DCR investigated the occurrence of rare, threatened, or endangered species; their habitats; and all other natural resources on or in the vicinity of the Facility's site. The DCR concluded that no impacts or disturbances of natural heritage resources are expected as a result of the Facility's construction or operation.<sup>28</sup>

Chemical Storage. Mr. Harkness testified that CPV will comply with spill control standards under federal, state, and local law by storing any chemicals used at the Facility in tanks, totes, and drums in diked areas.<sup>29</sup>

Environmental Monitoring. Mr. Harkness testified that CPV will implement environmental monitoring and management procedures to ensure full compliance with applicable laws, regulations, and permit conditions.<sup>30</sup>

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<sup>25</sup>*Id.* at 12.

<sup>26</sup>*Id.* at 12-13.

<sup>27</sup>*Id.* at 13.

<sup>28</sup>*Id.* at 14. The ER (at § 9.0 and Appendix G) contains CPV's correspondence with DCR and other details of DCR's natural heritage review.

<sup>29</sup>*Id.* at 14.

<sup>30</sup>*Id.*

## 2. *The Commission Staff's Prefiled Testimony*

The Commission Staff presented the prefiled testimony of three witnesses: Gregory L. Abbott, utilities analyst in the Division of Energy Regulation;<sup>31</sup> Mary E. Owens, principal financial analyst in the Division of Economics and Finance;<sup>32</sup> and Mark Carsley, principal research analyst in the Division of Economics and Finance.<sup>33</sup>

### a. Abbott Testimony

Mr. Abbott testified that the Commission Staff applied the criteria set forth in § 56-265.2 of the Code in evaluating CPV's Application.<sup>34</sup> Mr. Abbott determined that CPV has control of the proposed site for the Facility and has made substantial progress in obtaining the necessary environmental permits. He also noted that CPV has a well-developed preliminary business plan and that CPV's affiliated management team has extensive experience in developing such projects.<sup>35</sup> Mr. Abbott acknowledged that the Piedmont Environmental Council and several members of the public filed comments opposing the proposed Facility,<sup>36</sup> but he concluded that CPV meets the criteria set forth in § 56-265.2 of the Code. Accordingly, Mr. Abbott did not oppose CPV's request for a CPCN.<sup>37</sup> Mr. Abbott's findings are summarized below.

*Retail Rates And Reliability.* Mr. Abbott found that the addition of CPV's Facility will not adversely impact Dominion Virginia Power's retail rates and reliability. Dominion Virginia Power's Generation Interconnection Evaluation study showed that CPV's proposed interconnection will have no negative impact on the reliability of Dominion Virginia Power's system. In addition, all costs resulting from CPV's interconnection with Dominion Virginia Power's transmission line will be borne by CPV.<sup>38</sup>

*Water Supply And Wastewater Service.* Mr. Abbott addressed the water supply arrangements for the proposed Facility. Because CPV will utilize an air-cooled condenser in the Facility, the amount of water needed to operate the Facility will be greatly reduced. Lake Monticello Service Company ("LMSC"), a wholly owned subsidiary of AquaSource Utility, Inc., will supply the Facility with up to a maximum of 90,800 gallons of water per day from the Rivanna River. In addition, CPV will store approximately seven million gallons of water, providing sufficient water supply for approximately 77 days of plant operation.

Mr. Abbott found that LMSC's system has ample capacity to serve CPV's Facility without negatively impacting LMSC's retail rates and reliability. LMSC's permit currently allows for the withdrawal of up to 2.576 million gallons of water per day. CPV's estimated water usage represents approximately 3.5% of LMSC's permitted withdrawal limit and 9.9% of its existing plant

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<sup>31</sup>The prefiled testimony of Gregory L. Abbott was designated as Ex. GLA-7.

<sup>32</sup>The prefiled testimony of Mary E. Owens was designated as Ex. MEO-9.

<sup>33</sup>The prefiled testimony of Mark K. Carsley was designated as Ex. MKC-8.

<sup>34</sup>Ex. GLA-7, at 2-3.

<sup>35</sup>*Id.* at 11.

<sup>36</sup>*Id.* at 12-13.

<sup>37</sup>*Id.* at 2-3, 14.

<sup>38</sup>*Id.* at 4.



capacity. LMSC serves 3,240 connections totaling 46.7% of its existing plant capacity. Mr. Abbott estimated that LMSC will serve 4,676 connections at full build-out, or 67.4% of its existing plant capacity. Mr. Abbott testified that the Facility's on-site water supply (described above) has the added benefit of providing the Facility with the capability to curtail water delivery during LMSC's peak demand days and hours.<sup>39</sup>

With respect to wastewater service, Mr. Abbott testified that LMSC's existing treatment facility is approaching its maximum capacity. Therefore, LMSC and CPV are currently negotiating an agreement whereby CPV will finance construction of sufficient improvements to handle all wastewater generated from the Facility. Because LMSC's existing treatment facility will have to be upgraded whether or not the Facility is constructed, Mr. Abbott found that LMSC's other customers likely will benefit from CPV's willingness to bear the costs associated with the treatment upgrade.<sup>40</sup>

Because CPV's Facility is not contained within LMSC's service territory at this time, CPV and LMSC are negotiating contract rates for both water and wastewater service. Mr. Abbott concluded, however, that CPV's use of LMSC's unused capacity will lead to lower rates for LMSC's customers or, in the alternative, delay the need for future water rate increases. Mr. Abbott recommended the Commission require the water service to CPV to be limited to interruptible to further protect the reliability of service to LMSC's other customers.<sup>41</sup>

Coordinated Environmental Review. As part of the Staff's review of CPV's Application, the Staff requested that DEQ perform a coordinated review of potential environmental impacts of the proposed Facility.<sup>42</sup> CPV's Application and the ER were reviewed by DEQ and the Virginia Departments of Forestry; Game and Inland Fisheries; Agricultural and Consumer Services; Historic Resources; Transportation; and Mines, Minerals, and Energy. In addition, the County Administrator of Fluvanna County, the Thomas Jefferson Planning District Commission, the Virginia Marine Resources Commission, and the Virginia Department of Health were invited to comment on CPV's Application and ER. The participating agencies submitted comments on the proposed Facility to DEQ's Office of Environmental Impact Review, which summarized the comments and recommendations in its report to the Commission Staff dated December 5, 2001.<sup>43</sup>

Although Mr. Abbott testified that none of DEQ's recommendations should preclude CPV from receiving a CPCN, he requested that CPV address DEQ's recommendations in its rebuttal testimony. Mr. Abbott further testified that CPV has a continuing obligation to obtain all the necessary federal, state, and local environmental permits and approvals necessary to construct the proposed Facility.<sup>44</sup>

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<sup>39</sup>*Id.* at 5-6.

<sup>40</sup>*Id.* at 6.

<sup>41</sup>*Id.* at 6-7.

<sup>42</sup>*Id.* at 7.

<sup>43</sup>*Id.* at Appendix A.

<sup>44</sup>*Id.* at 7.

Site Control And Approval. Mr. Abbott noted that CPV has received a SUP from the Fluvanna County Board of Supervisors, which contains a list of conditions designed to mitigate environmental impacts. The SUP permits CPV to build the proposed Facility on a 388-acre tract of land near Route 636 in Fluvanna County. Mr. Abbott determined that CPV has a binding Option Agreement to purchase the three parcels of land that comprise the 388-acre site.<sup>45</sup>

Natural Gas Delivery. Mr. Abbott found that the Facility's combustion turbines will be fueled with natural gas delivered from Transco's interstate pipeline facilities. Because the Transco mainline is located on the site, no rights-of-way are required. Transco will construct an interconnection between its mainline system and pipeline facilities of Cove Point LNG Limited Partnership in Fairfax County, Virginia, which will provide backhaul transportation service of up to 90,000 dth/day to the Facility. CPV will purchase commodity gas on the spot market at the LNG interconnection.<sup>46</sup>

b. Owens Testimony

In prefiled testimony, Ms. Owens recommended that the Commission approve CPV's Application based on the success of its affiliated company in financing power projects, including five electric generating projects in Florida. Ms. Owens described CPV as a Maryland-based company that was established in 1999 for the purpose of developing the proposed Facility. CPV is independently owned and has no affiliation with any utility in the Commonwealth of Virginia.<sup>47</sup>

Ms. Owens testified that CPV has not yet entered into a purchased power contract for the sale of the output from the Facility.<sup>48</sup> In the confidential version of her testimony, Ms. Owens addressed CPV's business plan with respect to the proposed Facility. Depending on the business plan chosen, Ms. Owens found that CPV may obtain financing by combining equity from investors with non-recourse debt. Ms. Owens examined the financial statements of CPV's parent company, CPV Holdings, and its predecessor, Competitive Power Ventures, L.P., because CPV, as a newly formed company, did not have its own financial statements. As a private company, CPV does not have access to the public equity markets, nor has it issued debts in the public markets. However, CPV and its affiliates, through equity investors, have financed successfully other projects similar to the proposed Facility. For this reason, Ms. Owens recommended approval of CPV's Application and the granting of a CPCN.<sup>49</sup>

Finally, Ms. Owens commented on the current financial uncertainties in the power market. In light of these uncertainties, Ms. Owens recommended that any certificate granted by the Commission in this case include a two-year "sunset provision," beginning from the date that the Commission grants the CPCN.<sup>50</sup> Ms. Owens testified that a period of two years should be adequate

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<sup>45</sup> *Id.* at 10-11.

<sup>46</sup> *Id.* at 9-10.

<sup>47</sup> Ex. MEO-9, at 2-3, 6.

<sup>48</sup> *Id.* at 3.

<sup>49</sup> *Id.* at 4-5.

<sup>50</sup> *Id.* at 6.

for CPV to determine its business plan, obtain financing, and commence construction of the Facility.<sup>51</sup>

c. Carsley Testimony

In prefiled testimony, Mr. Carsley found that construction and operation of the Facility will have positive net economic benefits for Fluvanna County and the surrounding region. The most substantial benefits will be derived from increases in Fluvanna County's tax base and the associated tax revenues. CPV estimated that it will pay approximately \$1.2 million annually in direct property tax revenues to Fluvanna County. CPV also will be required to pay income tax to the Commonwealth of Virginia, resulting in additional economic benefits. During the Facility's construction phase, CPV will employ approximately 400 temporary workers at an average annual pre-tax wage of \$50,000. When the Facility is operating, CPV will employ 25 to 30 employees at an average annual pre-tax salary of \$55,000. Based on prior experience, CPV believes that it will hire employees and contractors from Fluvanna County and the surrounding region.<sup>52</sup> Although CPV did not undertake a formal economic impact analysis of the proposed Facility, Mr. Carsley determined that the lack of such analysis did not preclude a finding that the Facility will confer net economic benefits to Fluvanna County and the surrounding region.<sup>53</sup>

Mr. Carsley further testified that, according to CPV, these economic benefits will be achieved at little cost. CPV has received no present or future financial concessions from Fluvanna County or the Commonwealth. Moreover, construction and operation of the Facility will not impose additional costs on the County or Commonwealth, cause substantial population growth, or significantly impact local services, schools, roads, or other infrastructure. In the event that such costs are incurred, they will be defrayed or covered by CPV's annual contribution to the County's Special Capital Improvement and Debt Service Fund. These payments, which CPV estimates will total approximately \$18 million, will begin in 2002. The first two payments will be \$500,000 each; the third payment will be \$375,000; and the following payments will be based on the third payment and adjusted for inflation.<sup>54</sup>

Mr. Carsley testified that the Facility will operate as a merchant plant, adding approximately 520 MW of generating capacity within the control area of Dominion Virginia Power. Relying upon the conventional notion that within the electric power industry a positive correlation exists between market power and the ownership or control of generating capacity, Mr. Carsley believes that the addition of capacity by a non-incumbent utility such as CPV is, in general, a desirable outcome. Mr. Carsley noted, however, that certain economic and technical features of the electric power industry make it possible for some firms to have market power, even if they do not control a very large proportion of the capacity in the region. Mr. Carsley recommended that the Commission require CPV to report changes in its business plan, especially any plans to sell equity interests related to the project, so that the Commission may keep abreast of market power considerations. Mr. Carsley concluded that, from the standpoint of economic development and the

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<sup>51</sup> See *Id.* at 5-6.

<sup>52</sup> Ex. MKC-8, at 2-3.

<sup>53</sup> *Id.* at 5.

<sup>54</sup> *Id.* at 3-4.

promotion of a more competitive industry, the Facility appears to be reasonable and in the public interest. Accordingly, Mr. Carsley did not oppose approval of CPV's Application or the issuance of a CPCN.

### ***3. CPV's Prefiled Rebuttal Testimony***

CPV also presented the prepared rebuttal testimony of Chris Broemmelsiek and Glenn Harkness.<sup>55</sup> On behalf of CPV, Mr. Broemmelsiek and Mr. Harkness accepted every recommendation made by the Commission Staff in its prefiled testimony.

#### **a. Broemmelsiek Rebuttal Testimony**

In response to Mr. Abbott's recommendation (Ex. GLA-7, at 6), Mr. Broemmelsiek confirmed that CPV's water service will be "interruptible" in that the Facility's right to receive water will be subject to LMSC's ability to satisfy its contractual obligations to the Lake Monticello Homeowners' Association and to periods of low flow in the Rivanna River. In response to Ms. Owens' recommendation (Ex. MEO-9, at 6), Mr. Broemmelsiek agreed that, as a condition of approval of its Application, CPV will commence construction of the Facility within two years of the date that the CPCN is granted. Finally, in response to Mr. Carsley's recommendation (Ex. MKC-8, at 6), Mr. Broemmelsiek agreed that CPV will report to the Commission the name and corporate affiliation of any company that joins CPV as an equity partner or that purchases all or part of the Facility before or after its completion.<sup>56</sup>

#### **b. Harkness Rebuttal Testimony**

In response to Mr. Abbott's testimony (Ex. GLA-7, at 7-9), Mr. Harkness testified that CPV accepted each of the 12 recommendations made by DEQ as a condition of approval of its Application. Specifically, CPV agreed to set up a Forestland Recovery Fund and to contribute \$25,000 annually to the Fund for the life of the project, even though CPV believes that the Facility will have minimal adverse impacts on the natural vegetation on the project site. As requested by the Department of Mines, Minerals, and Energy, CPV also agreed to provide the results of its geotechnical evaluation to the Department's Division of Mineral Resources before making final commitments to build on the site.<sup>57</sup>

### **B. Comments By Public Witnesses**

Prior to the Initial Hearing, Daniel R. Holmes of the Piedmont Environment Council ("PEC") and several members of the public wrote to express opposition to the proposed Facility; other members of the public and elected officials in Fluvanna County wrote to express support for the Facility. At the Initial Hearing, thirteen public witnesses testified, all in opposition to the proposed Facility. Both in the written comments and in the oral testimony, the public witnesses

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<sup>55</sup>The prepared rebuttal testimony of Chris Broemmelsiek and Glenn Harkness were labeled as Exs. CB-3 and GH-5, respectively.

<sup>56</sup>Ex. CB-3, at 2.

<sup>57</sup>Ex. GH-5, at 2-4.

raised specific concerns on the following issues: the proximity of the proposed Facility to residential neighborhoods and land use,<sup>58</sup> construction traffic,<sup>59</sup> noise pollution,<sup>60</sup> the cumulative air emissions from existing and proposed generating plants in Fluvanna County and surrounding areas,<sup>61</sup> and the possible need for additional ozone monitoring stations in the area, to be purchased and installed by CPV.<sup>62</sup> Other witnesses raised concerns about the Facility's potential impact on the water supply and wastewater system serving the Lake Monticello community.<sup>63</sup> Two witnesses expressed concern about a possible evacuation from the Lake Monticello gated community in the event of an emergency at the Facility.<sup>64</sup>

### **III. HEARING EXAMINER'S RULING TO REOPEN THE RECORD**

Immediately following the close of the Initial Hearing in this case, the Commission remanded another case in which the developer proposed to construct and operate an electric generation facility in Fluvanna County.<sup>65</sup> The Commission concluded that under the applicable statutes, Va. Code §§ 56-265.2, 56-580 D, and 56-46.1, certain issues raised in that case had not been adequately addressed. The Commission remanded that case to the Hearing Examiner to receive additional evidence. Some of the issues ordered to be addressed in that remand were similar to the issues raised by public witnesses in this proceeding, including concerns with the cumulative effect on air quality from existing and proposed facilities, water usage, traffic, and the adequacy of emergency response plans at the Facility.

In consideration of the Commission's Remand Order in the *Tenaska* case, I issued a Hearing Examiner's Ruling on February 22, 2002, directing the record in this case to be reopened to receive additional supplemental testimony on the limited issues raised by the public witnesses.<sup>66</sup> I established a schedule and a hearing date of April 23, 2002, to receive evidence on the identified issues. I also invited DEQ to file any additional comments or testimony on the areas within its expertise.

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<sup>58</sup>Tr. at 27, 64-71, 73, 95.

<sup>59</sup>Tr. at 28, 61.

<sup>60</sup>Tr. at 59.

<sup>61</sup>Tr. at 29, 36, 51, 57, 61, 64-71, 73, 74-75, 79, 84, 87-89, 96, 104.

<sup>62</sup>Tr. at 32, 37, 73, 92.

<sup>63</sup>Tr. at 41, 61, 75-76.

<sup>64</sup>Tr. at 83, 101.

<sup>65</sup>*See Application of Tenaska Virginia Partners, L.P., for approval of a certificate of public convenience and necessity pursuant to Virginia Code § 56-265.2, an exemption from Chapter 10 of Title 56, and interim approval to make financial commitments and undertake preliminary construction work*, Case No. PUE010039, Tenaska Remand Order (Jan. 16, 2002) ("*Tenaska*").

<sup>66</sup>*See* Hearing Examiner's Ruling at 2, Case No. PUE010477 (Feb. 22, 2002). In the Ruling, I recognized that the General Assembly had before it (at that time) Senate Bill ("SB") 554, which could have affected the scope of the Commission's consideration in environmental matters. I stated that if such legislation were passed, it could be unnecessary to reopen this record and, as a result, the hearing could be cancelled. Although SB 554 was signed by Governor Warner on April 4, 2002, it was not scheduled to take effect until July 1, 2002. In addition, it was not clear to what extent the raised issues had been addressed elsewhere. Therefore, I found no cause to cancel the hearing.

#### **IV. SUMMARY OF THE RECORD ON FURTHER HEARING**

On April 23-24, 2002, I convened the Second Hearing to receive additional evidence on the limited issues that were raised at the Initial Hearing. Twenty-eight public witnesses, including officials of Fluvanna County and members of the public, offered testimony. As described in greater detail below, CPV introduced prefiled supplemental testimony and presented its witnesses for examination. Commission Staff also submitted prefiled supplemental testimony. Prior to the hearing, Columbia Gas advised the Hearing Examiner by counsel, Renae Carter, that it had elected not to participate in the Second Hearing.

##### **A. Public Testimony Offered At The Second Hearing**

###### ***1. Public Testimony Supporting CPV's Proposed Facility***

Eight public witnesses spoke in favor of CPV's proposed Facility. Macon Sammons, Jr., is the Fluvanna County Administrator and County Emergency Services Coordinator. He also serves as the chairman of the Local Emergency Planning Committee. Mr. Sammons' testimony addressed the process by which Fluvanna County evaluated and approved the SUP for CPV's proposed Facility.<sup>67</sup>

Mr. Sammons testified that he and two members of the Fluvanna County Board of Supervisors traveled to Seattle to learn about a gas-fired power plant that had been operating there for a number of years. Mr. Sammons spoke to local and state officials, neighbors, and business leaders, and no one expressed problems or complaints about the plant. Mr. Sammons and County officials met with DEQ representatives to discuss air quality considerations related to CPV's proposed Facility and DEQ's review process. The County hired an outside contractor to study the technical aspects of CPV's proposed Facility in areas such as air quality, noise abatement, traffic impact, and water withdrawal. That independent evaluation provided the basis for developing the 34 conditions contained in the SUP. Prior to approval of the SUP by the Board of Supervisors, CPV's proposed Facility was evaluated and endorsed by the County's Economic Development Commission, Chamber of Commerce, and Planning Commission.

Regarding air quality, Mr. Sammons testified that the County retains the right under the SUP to monitor, review, and inspect air quality records and to review remedial actions taken in response to possible future violations of the SUP. The County may request CPV, at its expense, to hire a firm selected by the County to review any violation or remedy. Mr. Sammons noted that noise levels attributable to plant operations may not exceed 50 decibels at the property lines. The County's 300-foot buffer requirement further mitigates potential noise and related impacts to nearby residents. Mr. Sammons next stated that there should be no significant effect from the Facility's operations on public roads because only eight to ten employees will be working at the Facility per shift. CPV is required to obtain approval of its construction traffic management plan from the Virginia Department of Transportation. Mr. Sammons also testified that CPV's air-cooled Facility will consume approximately 30,000 gallons of water per day, which is roughly the equivalent to the

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<sup>67</sup>Tr. at 130.

volume of a backyard swimming pool.<sup>68</sup> Finally, Mr. Sammons also addressed the impact of the project on the economic development, public safety, and financial development of the County.

Cabell Lawton, a resident of Palmyra and the director of planning and development for Fluvanna County, addressed the zoning text amendment that was approved by the Planning Commission and the Board of Supervisors to allow power plants to be permitted in Fluvanna County. The amendment considers the location of power plants and the confluence of utilities including high voltage electric transmission lines and natural gas pipelines (in the case of a gas-fired plant). He testified that the zoning text amendment protects the public by requiring the site of any power plant to be at least 300 acres in size (with at least 87% of the acreage left as undeveloped open space) and to have perimeter screening and buffering to minimize visual impacts. Additionally, the zoning text amendment requires the site to have access to the road system to minimize local traffic congestion, and it includes design and site criteria to limit the height of structures, among other things.<sup>69</sup>

Mr. Lawton also testified that the process for issuing the SUP included public hearings and intense review involving staff and outside consultants. The SUP imposes a number of conditions intended to mitigate impacts from the Facility. The SUP requires CPV to comply with lighting restrictions to reduce the level of light emitted from the Facility; increase setbacks and maintain a densely vegetated buffer to protect the scenic rural view of the site; manage non-deciduous trees in the buffer areas; maintain asphalt driveways and parking areas to minimize dust; and locate the proposed Facility on the center of the site. The Board of Supervisors incorporated conditions to ensure enforcement of the SUP, such as allowing the County to hire experts at CPV's expense to review the nature of any air quality violation.<sup>70</sup>

Mr. Lawton identified key points from Fluvanna County's Development Activity Report. The report indicates that Fluvanna County is the second fastest-growing locality in the Commonwealth. In Mr. Lawton's opinion, it is important to promote projects that provide revenues without detracting from the County's rural character. Mr. Lawton stated that approval of CPV's Facility will increase the acres of protected open space in the County.<sup>71</sup>

Shelly H. Wright, the Fluvanna County deputy coordinator for emergency services, read into the record the prepared statement of Fluvanna County Fire Chief Mike Brent, who was unable to attend the hearing. That statement reported that the safety of the general public is of paramount concern, and that Chief Brent had no reservations about the construction or operation of CPV's Facility in the County. According to Chief Brent, CPV's Facility will be designed and operated in compliance with the safety standards set by the National Fire Protection Association. The Facility will have its own fire protection system to assist firefighters in managing any emergency on the site. The system has a capacity of 2.25 million gallons of water, an emergency diesel water pump, fire hydrants, and a carbon dioxide fire suppression system.<sup>72</sup>

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<sup>68</sup>Tr. at 134-36.

<sup>69</sup>*Id.* at 146-49.

<sup>70</sup>*Id.* at 150-52.

<sup>71</sup>*Id.* at 152-54.

<sup>72</sup>*Id.* at 157.

Chief Brent reported that in the event of a fire or other emergency at the Facility, CPV will provide the first on-site response and Fluvanna County fire companies will provide the first off-site response. The County's fire companies are capable of responding to any emergency situation at the Facility, and the firefighters will be trained in all emergency and spill responses at the Facility. If additional assistance is needed, the Regional Hazardous Materials Team in Henrico County would be available. Additionally, CPV will prepare an integrated contingency plan to comply with all applicable federal, state, and local guidelines. Chief Brent verified that CPV personnel and all firefighters will be trained in the emergency and spill response procedures in conjunction with CPV's contingency plan.<sup>73</sup>

Chief Brent stated that, in his opinion, even a small-scale evacuation from the Lake Monticello community is unlikely because substances used at the Facility would not warrant such evacuations. Even in the unlikely event of an evacuation, the County's Emergency Operations Plan ("EOP") would be activated to implement the necessary procedures to protect the lives and property of Fluvanna County citizens. The County has begun to update its EOP and will add any procedures necessary to protect its citizens in the event of an evacuation. Chief Brent confirmed that new technology, as well as compliance with federal and state requirements, will make CPV as safe or safer than other industries in Fluvanna County.<sup>74</sup>

Jay Sherrill, a resident of Fork Union and the chairman of Fluvanna County's Economic Development Commission, testified that the Commission unanimously passed a resolution supporting CPV's Facility. The County has minimal infrastructure to support a growing population. CPV already has supported the community by helping with the development of new parks and sports fields. Mr. Sherrill does not believe that his health, safety, and welfare are at risk.<sup>75</sup>

Minor Eager, another member of Fluvanna County's Economic Development Commission, commented on other potential uses of the 388-acre proposed site if CPV were prohibited from building its Facility. Mr. Eager noted that if the site were developed into residential housing, it would support approximately 190 homes (and up to 1,164 homes if the zoning changed), and each household would rely on well and septic systems. Additionally, each household would generate pollution from automobile traffic and the use of appliances such as lawnmowers, chainsaws, and oil furnaces. Mr. Eager suggested that these households could cause worse cumulative effects, generating a greater amount of pollution than CPV's Facility. Mr. Eager speculated that the development of 190 additional homes would bring about a tax loss of \$440,000 per year, which would be borne by County taxpayers.<sup>76</sup>

Mr. William Kidd lives in Scottsville and is a member of the Fluvanna County Planning Commission. Mr. Kidd testified that one of the County's goals in drafting its Comprehensive Plan was to develop clean industry to increase the tax base, and he believes that power plants are one of the cleanest industries that can be developed in Fluvanna County. Mr. Kidd

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<sup>73</sup>Tr. at 157-58.

<sup>74</sup>*Id.* at 158-59.

<sup>75</sup>*Id.* at 160-63.

<sup>76</sup>*Id.* at 163-67.



met with DEQ to discuss the environmental permitting process, and he has visited numerous power plants in Georgia, Texas, and Virginia to evaluate their local impact. Mr. Kidd found that many people living near the power plants were either unaware of the plants or did not object to their operations. The plants generated very little noise; even when Mr. Kidd stood between the generators and the cooling towers of one facility he heard little noise. Mr. Kidd believes that CPV's Facility would not be a detriment to property values.<sup>77</sup>

Francis Michael Seay is a lifelong resident of Fork Union. He testified that he is in favor of CPV's Facility. He considers himself to be an environmentalist, and testified that, to the degree that the production of power from CPV's clean fuel-burning plant can displace production from the more polluting plants, CPV's plant will benefit the environment.<sup>78</sup>

Jane C. Pendergrass is a native of Fluvanna County and serves on Fluvanna County's Economic Development Commission, the Fork Union Sanitary District Advisory Board, and the Work Force Investment Board for Regions 9 and 10. Ms. Pendergrass testified that she supports CPV's proposed plant. Ms. Pendergrass focused her testimony on CPV's compliance with DEQ's environmental standards. In her capacity as executive director of a nursing home that operates a wastewater treatment facility, Ms. Pendergrass has interacted regularly with DEQ and the Virginia Department of Health over the past 11 years regarding environmental issues related to wastewater discharge. In her experience, both DEQ and the Department of Health leave little, if any, room for error in complying with permits. Ms. Pendergrass believes that DEQ monitors permit levels closely and responds appropriately.<sup>79</sup>

Jimmy Perkins, a native of Fluvanna County and another member of Fluvanna County's Economic Development Commission, addressed the potential environmental impacts from CPV's Facility and its economic benefits. He believes that CPV's Facility will be one of the cleanest power plants that can be built because it is gas-fired and will use a catalyst to reduce CO emissions. He has reviewed the cumulative impacts analyses conducted by Tenaska, CPV, and DEQ, and he believes that the cumulative environmental impact of the 23 new facilities would be less than the impact of the Bremono Bluff coal-fired power plant. Mr. Perkins testified that Fluvanna County, as the second fastest-growing county in Virginia, is in dire need of tax revenue because the revenues from the railroad and the Bremono plant have been eliminated or diminished. He does not believe that Fluvanna County can attract the same tax base that CPV's Facility can provide from other sources.<sup>80</sup>

## ***2. Public Testimony Opposing CPV's Proposed Facility***

Nineteen public witnesses spoke in opposition to the proposed Facility at the Second Hearing. Norma Hutner, a newly elected supervisor on the Fluvanna County Board of Supervisors, opposed the plant but made clear that she was not testifying in an official capacity. She testified that the SCC should not consider Fluvanna County's budget commitments in determining whether

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<sup>77</sup>Tr. at 211-18.

<sup>78</sup>*Id.* at 240-43.

<sup>79</sup>*Id.* at 243-46.

<sup>80</sup>*Id.* at 246-52.

to approve CPV's Application. Ms. Hutner also questioned whether CPV will operate its proposed Facility. Referring to a document issued by Warburg Pincus, Ms. Hutner stated that CPV does not own or manage power plants in commercial operation. Ms. Hutner also testified that Mr. Robert Chittenden, a representative of the County's Local Emergency Board, had informed her that the County does not have an emergency plan for the gated Lake Monticello community. Ms. Hutner expressed concern that the community's two gates to Route 53 would be closed in the event of an emergency at the Facility.<sup>81</sup> Finally, Ms. Hutner testified that AquaSource is making commitments with respect to water supply and wastewater before it obtains the necessary permits to do so.<sup>82</sup> In Ms. Hutner's opinion, AquaSource is relying on permits obtained before the population at Lake Monticello increased to present levels.<sup>83</sup>

Janice Taylor, a resident of the Lake Monticello community, testified that Tenaska's and CPV's water usage could cause problems in the event of a drought. Regarding air quality, Ms. Taylor stated that CPV's Facility might produce less emissions of particulate matter than Tenaska's facility, but those emissions could add to the particulate pollution problem. Ms. Taylor opposes approval of CPV's Application until air quality impacts are understood and an evacuation plan for the Lake Monticello community is in place.<sup>84</sup>

Laurence Hutner, a resident of the Lake Monticello community, testified that he is an architect by training. Mr. Hutner expressed concern that the County has inadequate expertise to oversee the construction of CPV's Facility from a public safety standpoint.<sup>85</sup>

Marilee Black Blakely is a resident of Palmyra. Ms. Blakely stated that she was adversely affected by the SCC's approval of Tenaska's certificate because Tenaska's use of oil will increase tanker truck traffic and will contribute to pollution. Ms. Blakely questioned whether consideration had been given to the safety of bicyclists on local roadways and to the possibility of terrorist attacks at power plants in Fluvanna County. She stated that she is the disaster response person for her church, but she was unaware of the County's emergency disaster plan until this hearing.<sup>86</sup>

Catherine Neelley, a resident of the Lake Monticello community was particularly concerned with the potential impact of the Facility on the community's water and wastewater systems. She was deeply concerned that the Facility would consume water necessary for the Lake Monticello community at full build-out. Moreover, she testified that the Commission recently held a hearing in Case No. PUE010424 to review the LMSC's request to expand its service territory. Such an expansion would have an unquantified impact on water supply. Further, Ms. Neelley stated

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<sup>81</sup>Tr. at 179-83. Ms. Hutner acknowledged that her concern with the lack of an emergency and evacuation plan goes above and beyond CPV's Facility. *Id.* at 182.

<sup>82</sup>At the Second Hearing, various witnesses referred to AquaSource as the entity that would provide water and wastewater services to the Facility under CPV's proposal. As noted above, LMSC, a subsidiary of AquaSource, would, in fact, provide such services.

<sup>83</sup>During her testimony, Ms. Hutner also offered the prepared statement of Mr. Joe Mannino. I accepted Mr. Mannino's statement into the record as written comments.

<sup>84</sup>Tr. at 189-92.

<sup>85</sup>*Id.* at 193-99.

<sup>86</sup>*Id.* at 200-10.

that the LMSC's current permit allows it to flow 600,000 gallons of water a day through its wastewater plant, and that the plant currently treats more than 532,000 gallons a day. She expressed concern that the proposed Facility is not in the LMSC territory and that CPV and the LMSC have not yet entered into a contract for the LMSC to provide water and wastewater services to CPV.<sup>87</sup>

Carolyn Kardan, a resident of Palmyra, testified about the cumulative effects of power plants. CPV's Facility would become the third power plant in Fluvanna County. Ms. Kardan expressed concern that Fluvanna County will eventually reach non-attainment for ozone and that exposure to particulate matter and carcinogens could lead to illnesses and early death.<sup>88</sup>

Lisa Hurdle, a resident of the Lake Monticello community, opposes CPV's Facility because it would be approximately 1 1/2 miles from her home.<sup>89</sup> Ms. Hurdle questioned whether the commitments made by CPV to Fluvanna County will be honored if CPV does not operate the Facility.<sup>90</sup>

Jean DeMarco, a resident of the Lake Monticello community, testified that property values will diminish if power plants are built nearby. She also expressed concern regarding health impacts relating to the Facility's emissions.<sup>91</sup>

Robert L. Smith resides in Palmyra. He testified that he holds a Ph.D in Ecology, is a Professor Emeritus of Ecology at West Virginia University, and has written two textbooks on ecology. Dr. Smith's testimony focused on two topics: the information provided to local residents by CPV regarding the Facility, and the cumulative air emissions from CPV's Facility.

First, Dr. Smith questioned whether the financial commitments made by CPV to the County will be enforced if CPV sells the Facility.<sup>92</sup> Dr. Smith stated that CPV's Application misstated the distance of the Facility to the Seven Oaks and Fox Hollow developments. Referring to his own measurements, Dr. Smith stated that these residential areas are closer to the Facility than indicated by CPV.<sup>93</sup> Dr. Smith also suggested that the project would chill housing development in Lake Monticello.

Next, Dr. Smith stated that air emissions from CPV's Facility will contribute unacceptable cumulative air quality impacts in Fluvanna County.<sup>94</sup> Dr. Smith testified that CPV's Facility has the potential to emit 237 metric tons of NO<sub>x</sub> per year. When combined with the 650 tons of NO<sub>x</sub> that could be emitted by Tenaska's facility and the 16,000 tons of NO<sub>x</sub> emitted by the Brema plant each year, Dr. Smith testified that CPV's emissions would significantly affect the air

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<sup>87</sup>*Id.* at 220-29.

<sup>88</sup>*Id.* at 234-37.

<sup>89</sup>Ms. Hurdle introduced a map of the Lake Monticello community, which was designated as Ex. 15.

<sup>90</sup>Tr. at 237-40.

<sup>91</sup>*Id.* at 252-65.

<sup>92</sup>*Id.* at 267-69, 272-73.

<sup>93</sup>*Id.* at 269-71.

<sup>94</sup>*Id.* at 273. Dr. Smith's prepared comments and supporting exhibits were designated as Ex. 13. Additionally, Dr. Smith's study entitled, "Ozone Pollution From The Proposed Power Plants," and supporting charts were labeled as Attachment D to the prepared comments of Dan Holmes.

quality in the local area. Dr. Smith further stated that NO<sub>x</sub> converts to ozone under hazy, stable atmospheric conditions due to subsidence inversions.<sup>95</sup> Dr. Smith referred to a chart showing that an ambient ozone measurement of 0.08 ppm was taken on July 12, 1999, at the ozone monitoring station located in the University of Virginia Pace Experimental Forest in Fluvanna County.<sup>96</sup> Citing results from an air quality modeling exercise, Dr. Smith testified that projected NO<sub>x</sub> emissions from Tenaska's and CPV's facilities would have measured 0.18 ppm, which would trigger an ozone alert under EPA's guidelines. According to Dr. Smith, these data show that cumulative NO<sub>x</sub> emissions from the two facilities would have a serious impact on air quality in Fluvanna County.<sup>97</sup>

Ethel Karnbach, a resident of Lake Monticello, expressed concern about the presence of construction trucks on Route 53 and the possible loss in the property value of her home. She expressed concern about the County's evacuation plan from the Lake Monticello community and whether the local fire department has adequate expertise to respond to an emergency at the Facility. Ms. Karnbach also raised concerns about potential carcinogens associated with power plant emissions. Finally, Ms. Karnbach questioned whether CPV will keep its promises to the community if the Facility is sold.<sup>98</sup>

Ellen Anderson questioned whether competition within Virginia's power industry would be nurtured if local power plants sell power to other states. She expressed concern about drifting particulate matter, the effects of acid rain, and mercury contamination in fish caused by power plants. She also questioned the impacts of power plants on tourism and the results of the cumulative impacts study funded by CPV. She believes that there are other economical choices for the County that are more sound and less risky than power plants.<sup>99</sup>

Joyce Chippindal, a resident of Lake Monticello, also opposes CPV's Facility because of its location and its impacts on air quality and water supply. She expressed concern that CPV's Facility will contribute to cumulative air impacts in Fluvanna County. She stated that water is a scarce resource in the County, and she questioned how AquaSource will supply water to CPV when the water levels in the Rivanna River are low. Ms. Chippindal also expressed concern regarding the County's evacuation plan.<sup>100</sup>

Keith Goodenough lives in Troy. Mr. Goodenough stated that, because most people would prefer to live away from a power plant, the property values of houses located near CPV's or Tenaska's facilities will be affected. Mr. Goodenough believes that visual impacts from CPV's Facility could affect tourism in Central Virginia. Mr. Goodenough noted that Tenaska's facility was approved even though it requires far more water than CPV's proposed Facility. Mr. Goodenough also questioned the net tax yield for Tenaska's and CPV's facilities after the state

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<sup>95</sup>Tr. at 276.

<sup>96</sup>*See, e.g.*, Tr. at 300.

<sup>97</sup>*Id.* at 274-82

<sup>98</sup>*Id.* at 320-22.

<sup>99</sup>*Id.* at 323-29.

<sup>100</sup>*Id.* at 329-34.

contribution to schools was reduced.<sup>101</sup> He expressed concern that Virginia's new power stations will provide electricity to other states.<sup>102</sup>

Robert E. Bill lives in Palmyra, and he opposes the location of both Tenaska's and CPV's facilities in the populated area of Fluvanna County. Mr. Bill questioned whether CPV will sell the Facility after the permits and licenses have been issued. Mr. Bill stated that Tenaska's and CPV's power plants will adversely impact ozone levels. He concluded by testifying that the State of Virginia does not need additional electric power.<sup>103</sup>

Denise Beattie, a resident of Lake Monticello, testified that pollution in her native Long Island, New York, caused local frog populations to disappear and contaminated the shellfish. She expressed concern that the cumulative effects of power plants will increase pollution levels here in Virginia and exacerbate her asthmatic condition.<sup>104</sup>

Joan D. Goodenough, a long-time resident of Troy, testified on a variety of issues. Ms. Goodenough expressed concern that CPV was not going to operate the Facility. She believes that the SCC should consider the populations of Fluvanna County and the Lake Monticello community. Ms. Goodenough suggested that the Fluvanna County fire department was not well-prepared to handle emergencies. Ms. Goodenough further testified about concerns over sewage, water supply, air pollution, and loss in property values.<sup>105</sup> She testified that CPV should be required to construct an ozone monitoring station.

Dr. Evelyn W. Gordon, a resident of Lake Monticello, stated that CPV's Facility does not belong in a rural residential district where half of the County's population resides. She believes that air pollution is a serious matter, and she questioned how residents of the gated Lake Monticello community would evacuate in the case of an accident or terrorist attack at CPV's Facility. She is concerned that the two gates facing Route 53 would be closed, which could prevent residents from evacuating. Dr. Gordon stated that the County has neither the equipment, nor the trained personnel, to address such safety risks.<sup>106</sup>

Brenda Beazley lives on Route 631 in Fluvanna County. Ms. Beazley testified that Fluvanna's citizens should not be expected to shoulder the environmental burden from additional power plants, and she expressed concern regarding the air quality impacts from such facilities.<sup>107</sup>

Dan Holmes testified on behalf of the PEC in his capacity as Orange County Field Officer and Special Projects Coordinator. In testimony and in written comments submitted prior to the Second Hearing, Mr. Holmes addressed three topics: the Displacement Report prepared by EEA; CPV's commitments to Fluvanna County as mandated by its SUP; and cumulative air impacts

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<sup>101</sup> As I describe below, CPV's witness Mr. Broemmelsiek stated that CPV's expected property tax payment of \$1.9 million would affect the amount of school funding by approximately \$400,000. Tr. at 483-84.

<sup>102</sup> Tr. 334-42.

<sup>103</sup> *Id.* at 343-47.

<sup>104</sup> *Id.* at 348-50.

<sup>105</sup> *Id.* at 350-64.

<sup>106</sup> *Id.* at 365-67.

<sup>107</sup> *Id.* at 368-73.

in Fluvanna County and the surrounding areas.<sup>108</sup> Mr. Holmes first questioned the conclusions reached in EEA's Displacement Report because he believes that older coal-fired facilities will continue to provide the majority of electric generation, while new facilities will serve out-of-state markets.<sup>109</sup> Mr. Holmes next expressed concern that, in the event that CPV sells its Facility, the company will not be bound to commitments made to Fluvanna County as part of its SUP.<sup>110</sup> He also questioned whether CPV will place the majority of the proposed site in a conservation easement to restrict the land permanently from future development.<sup>111</sup> Regarding air quality, Mr. Holmes questioned the results of the cumulative impacts analyses conducted by DEQ, Tenaska, and CPV. Mr. Holmes testified that Tenaska's analysis omitted the proposed Kinder Morgan facility from its air quality model.<sup>112</sup> Mr. Holmes also expressed concern that data used by DEQ, Tenaska, and CPV in their air quality models were unreliable due to both the proximity of the air quality monitors to Fluvanna County and the County's topography. Mr. Holmes supported the analysis of Dr. Smith, and testified that the Facility will have an adverse impact on Fluvanna County.

## **B. Testimony And Evidence Presented By CPV At The Second Hearing**

CPV presented supplemental evidence on the identified limited d issues through the testimony of four witnesses: Shelly H. Wright, Fluvanna County Deputy Coordinator for Emergency Services; Mr. Broemmelsiek; Frederick M. Sellars, vice president and national director of Energy Facilities Permitting for TRC; and Harry Vidas, vice president of EEA.

### **1. Wright Testimony**

Shelly H. Wright testified in her capacity as deputy coordinator for emergency services. Ms. Wright organizes the Local Emergency Planning Committee and serves as a liaison for emergency services between the state and Fluvanna County. In addition, Ms. Wright is responsible for the County's response on issues related to hazardous materials.<sup>113</sup>

Ms. Wright testified that Fluvanna County has an EOP that is recognized by the Commonwealth of Virginia. The EOP covers the County's response to any public safety hazard, until the time that the hazard has ceased or no longer exists. Ms. Wright stated that the Lake Monticello community is covered by the County's EOP and that CPV's proposed Facility would also be covered because it is within the County's boundaries. The County is currently revising its EOP and, as part of the revision, has contacted representatives of CPV and Tenaska to discuss tabletop and field exercises at both power plants. Any new information from those exercises will be incorporated in the revised EOP.<sup>114</sup>

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<sup>108</sup>Mr. Holmes' prepared comments and exhibits were marked as Ex. 17.

<sup>109</sup>Ex. 17, at 2-7.

<sup>110</sup>*Id.* at 7-8.

<sup>111</sup>*Id.* at 8.

<sup>112</sup>Tr. at 386-87; Ex. 17, at 10.

<sup>113</sup>Tr. at 438-39

<sup>114</sup>*Id.* at 440-42.

Ms. Wright testified in response to Marilee Blakely's testimony that she was unaware of the EOP even though she is a disaster relief representative for her church. Ms. Wright explained that the EOP carries the locality through the public safety hazard state. Disaster relief is a separate function that occurs once there is no longer a safety problem.<sup>115</sup> In response to Ms. Hutner's testimony about her discussions with Mr. Chittenden regarding the existence of the EOP, Ms. Wright stated that Mr. Chittenden's erroneous belief that the County lacked an EOP was recently corrected in a subsequent meeting of Mr. Chittenden, Ms. Wright, and Chief Brent, among others. At that meeting, Mr. Chittenden was informed that Fluvanna County's EOP is recognized by the state and that the County is capable of performing every part of that plan.<sup>116</sup>

## **2. *Broemmelsiek Testimony***

Mr. Broemmelsiek introduced his prepared supplemental testimony,<sup>117</sup> and testified that the Facility will be the first power plant in the Commonwealth to use a dry cooling technology, which significantly reduces the Facility's water use, and that CPV volunteered to install a catalyst to minimize emissions of CO and volatile organic compounds.<sup>118</sup>

Mr. Broemmelsiek's testimony addressed various concerns raised by the public with regard to the Facility, including: (i) whether CPV will construct and operate the facility; (ii) the proximity of the plant to residential neighborhoods and land use; (iii) traffic issues; (iv) air quality issues; (v) water and wastewater issues; (vi) noise pollution; (vii) emergency response and the issue of the evacuation of the Lake Monticello gated community in case of an emergency at the plant; (viii) County oversight of construction of the Facility; (ix) the potential for the Facility to export the electricity it produces; and (x) the impact of the Facility on the school tax formula.

*Construction And Operation Of The Facility.* Mr. Broemmelsiek addressed concerns raised by certain public witnesses that CPV will not ultimately construct and operate the Facility.<sup>119</sup>

*Location And Land Use.* Mr. Broemmelsiek addressed the specific land use issues raised by County residents. First, with respect to the concerns about the Facility's location, including its proximity to the Lake Monticello residential community, Mr. Broemmelsiek testified that CPV carefully selected the proposed site because it affords substantial acreage and natural characteristics that will buffer the Facility, thereby minimizing noise and visual impacts to the surrounding area. He emphasized that the Facility will be constructed on a cleared hayfield within the interior of the 388-acre parcel, and approximately 90% of the site will remain an undisturbed, primarily wooded space, of which approximately 75% will be placed in a permanent conservation easement, thus protecting the entire site from future development.<sup>120</sup>

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<sup>115</sup>Tr. at 440-41.

<sup>116</sup>*Id.* at 442-44.

<sup>117</sup>Ex. 19.

<sup>118</sup>Tr. at 451-53.

<sup>119</sup>*See* Tr. at 168-70.

<sup>120</sup>Ex. 19, at 22-23.

Mr. Broemmelsiek also provided visual aids to demonstrate that the Facility will not be visible off-site, except for the top portion of the stacks from a few locations.<sup>121</sup> Mr. Broemmelsiek testified that, as a condition of the SUP, any structure at the site that is visible above the tree line will be painted an earth tone to be approved by the County Administrator.<sup>122</sup>

In addressing the concern that the Facility would negatively impact property values in the County,<sup>123</sup> Mr. Broemmelsiek explained that CPV conducted a study of the nearest power plant that is similar to the Facility, the Gordonsville energy facility in Louisa County. This study concluded that there was no difference in the growth of property values in the neighborhood adjacent to the Gordonsville facility compared to the rest of Louisa County. Mr. Broemmelsiek also testified that since CPV announced its proposal to develop the Facility in October 2000, home building in the area has not ceased, with 450 housing starts in Fluvanna County last year alone. Mr. Broemmelsiek concluded that the assertion that CPV's proposed Facility is depressing property values is not supported by the facts.<sup>124</sup>

Traffic Issues. Mr. Broemmelsiek addressed the concern that construction and employee traffic would disrupt traffic on Route 53. He stated that as part of its Application, CPV submitted a traffic impact analysis at the proposed site that concluded the Facility will neither create nor exacerbate traffic conditions on Route 53, or any other principal or secondary roads in the surrounding area. He also testified that the analysis concluded that because there will be only a negligible change in the level of service on the surrounding roads, traffic will continue to flow on the surrounding roads in a safe and efficient manner. Mr. Broemmelsiek further testified that, despite the fact that neither construction nor operation of the Facility will adversely impact traffic on nearby roads, CPV accepted traffic-related conditions as part of the SUP. Additionally, a portion of the \$18 million that CPV will contribute to the Fluvanna Fund is earmarked for projects that will ensure that traffic on roads in the vicinity of the Facility will not be impeded or burdened by the Facility. Finally, Mr. Broemmelsiek testified that, in the context of this proceeding, CPV has committed to discuss safety issues relating to construction traffic with the Department of Transportation and the appropriate Fluvanna County officials.<sup>125</sup>

Mr. Broemmelsiek also commented that many public witnesses had expressed concern regarding the number of oil tanker trucks that would use the roadways to service the Facility.<sup>126</sup> He clarified that the Facility will not use backup fuel oil and therefore will use no oil, except for the 500 gallons of oil that will be stored on-site to run the diesel fire pump in the event that the Facility loses electricity.<sup>127</sup>

Air Quality Issues. Mr. Broemmelsiek also addressed public witness concerns related to air quality issues. He stated that CPV conducted a cumulative air quality impact analysis which, together with analyses undertaken by Tenaska and the DEQ, demonstrated that the air

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<sup>121</sup> See Ex. 22.

<sup>122</sup> Tr. at 461-64.

<sup>123</sup> See Tr. at 329-34.

<sup>124</sup> Tr. at 456-59.

<sup>125</sup> Ex. 19, at 23-25.

<sup>126</sup> See Tr. at 200-10.

<sup>127</sup> Tr. at 479.



quality impacts associated with CPV's project are negligible. He also referred to a report entitled *Environmental Benefits of New Natural Gas-Fired Generation in Virginia* (the "Displacement Report"), conducted by EEA at CPV's request, which concluded that the Facility and other gas plants like it will improve air quality since they will displace emissions from higher-emitting units that otherwise would run.<sup>128</sup>

Water And Wastewater Issues. Mr. Broemmelsiek also responded to the various concerns raised with regard to the potential impacts the proposed Facility may have on the community water supply or wastewater treatment facilities.<sup>129</sup> Mr. Broemmelsiek stated that the LMSC currently provides water supply and wastewater treatment services to customers within a nearby service area, and the LMSC currently has access to sufficient water supplies both to meet all of its existing and anticipated future obligations to its customers as well as to supply CPV's modest water requirements. Mr. Broemmelsiek provided a chart illustrating CPV's water usage in comparison to the Lake Monticello Community's water usage at full build-out.<sup>130</sup>

Mr. Broemmelsiek further testified that CPV is presently negotiating with the LMSC for a final agreement to provide water supply and wastewater treatment services to the Facility. He stated that in the course of these discussions, CPV has entered into a Memorandum of Understanding with the LMSC to expand the capacities of the LMSC's water and wastewater treatment plants. While the details of the contract are still under negotiation, he clarified that the terms will provide that CPV will bear the entire cost of providing water and wastewater service to the Facility, including the cost of expanding the LMSC wastewater treatment capacity to meet the Facility's needs. Mr. Broemmelsiek concluded that because CPV has agreed to bear the entire cost of improving the plant to provide service, there will be no increase in costs to LMSC's existing customers.<sup>131</sup> In response to a question by Staff, Mr. Broemmelsiek emphasized that the contract CPV is negotiating with the LMSC will have an interruptible rate, meaning that the LMSC will supply the Facility with water and wastewater services subject to first meeting the community's needs.<sup>132</sup>

He testified that the LMSC recently applied to the Commission to amend its CPCN to expand its service territory. In that proceeding, the vice president of AquaSource, the LMSC's parent, testified that the LMSC presently serves approximately 3,340 equivalent residential connections. Mr. Broemmelsiek testified that the LMSC is withdrawing no more than 700 of the 2,683 gallons per minute it is authorized to withdraw, no more than 0.92 million gallons of the 2.576 million gallons it may withdraw per day, and no more than 197 million gallons of the 400 million gallons it is authorized to withdraw annually. Furthermore, Mr. Broemmelsiek stated that within the service area an "equivalent residential connection" historically has used less than 160 gallons of water per day.

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<sup>128</sup>Tr. at 25-28. As summarized below, CPV's witness Mr. Harry Vidas provided additional detail on the Displacement Report.

<sup>129</sup>*Id.* at 220-229; 329-34..

<sup>130</sup>Ex. 25.

<sup>131</sup>Ex. 19, at 29-30.

<sup>132</sup>Tr. at 496-97.

Mr. Broemmelsiek also testified that the LMSC is near the permitted capacity of its existing wastewater treatment plant, which is presently permitted to discharge up to 600,000 gallons of treated wastewater per day. He also stated that the LMSC's average daily discharge is approximately 532,000 gallons per day. He testified that this means the present treatment plant must be expanded and its discharge permit must be amended if the plant is to serve the future connections anticipated at the Lake Monticello community through build-out. Thus, the capacity of LMSC's existing treatment plant is planned to be expanded regardless of whether or not CPV's Facility is constructed. Regarding water treatment capacity, Mr. Broemmelsiek testified that the LMSC water treatment plant is currently being expanded to a capacity of 1.2 million gallons per day, and he concluded that such capacity is more than sufficient to provide both the daily water use of the Lake Monticello community at full build-out and CPV's normal daily water use. Mr. Broemmelsiek also reiterated that CPV has committed to pay the full cost of the water treatment capacity it will use.<sup>133</sup>

Noise. Mr. Broemmelsiek's testimony addressed concerns about noise pollution and CPV's plans to mitigate noise at the Facility during construction and operation. Mr. Broemmelsiek explained that CPV will surround the gas combustion turbines, a primary noise emitter, with acoustical walls for sound attenuation purposes, and the gas combustion turbines will be located 950 feet from the nearest property line. In addition, CPV will build the air-cooled condenser no closer than 850 feet from the nearest property line and no closer than approximately 1,300 feet from the nearest residence.<sup>134</sup> Mr. Broemmelsiek testified that by surrounding the turbines within the acoustical walls, together with locating the Facility in the interior of a mostly forested site, noise generated by the Facility will be greatly minimized.<sup>135</sup>

Mr. Broemmelsiek stated that, as part of its Application, CPV submitted a noise analysis that measured existing noise levels, to predict noise levels for the proposed Facility and to ensure that normal operation of the Facility will not result in significant noise increases to the surrounding residential areas. He stated that this analysis determined that the noise generated by the Facility during commercial operation will not exceed 50 dBA at any property boundary. In addition, he stated the SUP stipulates that noise levels attributable to plant operations may not exceed 50 dBA at the property lines. According to Mr. Broemmelsiek, 50 dBA is less than the volume of a normal conversation and is 10 dBA below the standard approved by the Board of Supervisors in Tenaska's SUP. He further testified that CPV's SUP stipulated that construction activities that produce noise between the hours of 7:00 p.m. and 7:00 a.m. may not exceed a noise level of 50 dBA at the property lines. For all of these reasons, Mr. Broemmelsiek concluded that the record fully addressed the noise-related concerns that were raised at the hearing.<sup>136</sup>

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<sup>133</sup>Ex. 19, at 30-31.

<sup>134</sup>Mr. Broemmelsiek noted during his oral testimony that these numbers were updated since he filed his prepared supplemental testimony on March 22, 2002.

<sup>135</sup>Ex. 19, at 32-33.

<sup>136</sup>*Id.* at 33.

Emergency Response And Evacuation. Mr. Broemmelsiek also addressed the concerns with regard to the potential risk to the Lake Monticello community and the Facility's emergency response plan.<sup>137</sup> Mr. Broemmelsiek explained that there is no basis for concluding that the Facility represents a safety risk for residents in the Lake Monticello community or for any other residents, and pointed out that the safety record of natural gas-fueled combined-cycle power plants is exceptional, and no accident at any such plant has occurred or can be anticipated at a magnitude that would require the evacuation of even a portion of the Lake Monticello community. Mr. Broemmelsiek also testified that "safety starts with the very design of the power plant itself,"<sup>138</sup> and the Facility will be subject to many local, state and national codes and standards. Mr. Broemmelsiek provided a list of many standards that will apply to the Facility.<sup>139</sup>

In addition, Mr. Broemmelsiek testified that no solid or hazardous wastes will be stored at the Facility, and that the Facility will have its own fire protection system. The Facility will also comply with all applicable local, state, and federal regulations for the prevention of chemical spills and other accidents. For example, CPV will prepare a Stormwater Pollution Prevention Plan in accordance with the Virginia Pollutant Discharge Elimination System program, and a spill prevention plan in accordance with federal Spill Prevention, Control and Countermeasure Regulations. These regulations require spill prevention safeguards for all chemicals used on-site and training of company personnel on appropriate spill prevention and response measures and procedures.<sup>140</sup>

Mr. Broemmelsiek testified that no substances will be stored at the site that could potentially create the need to evacuate any households in the Lake Monticello community. He stated that the major chemical stored on-site will be aqueous ammonia, which consists of 19% ammonia and 81% water. He explained that the ammonia is diluted to this extent so that it does not constitute a hazardous material, and therefore does not pose a threat to the community. He also testified that the aqueous ammonia will be stored in a tank with secondary containment.<sup>141</sup> In addition to the aqueous ammonia, the Facility will have a 500-gallon diesel oil tank on-site, which would be used to run the diesel fire pump in the event that the Facility loses electricity and must fight a fire on-site. Mr. Broemmelsiek further testified that the Facility would have no more than ten 55-gallon drums of minor chemicals used to treat water, which would be stored in an enclosed area with a drain leading to a containment vessel under the chemical storage area to prevent any groundwater contamination.<sup>142</sup>

Mr. Broemmelsiek explained that CPV had committed to the County that CPV would pay the County's costs for hiring independent, expert building inspection personnel. He concluded that this will ensure the County has the ability to effectively oversee the construction process. Moreover, Mr. Broemmelsiek added that CPV did not hire the low bidder to build the

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<sup>137</sup>Tr. at 350-64; 365-67.

<sup>138</sup>*Id.* at 469.

<sup>139</sup>*See* Ex. 23.

<sup>140</sup>Ex. 19, at 33-35.

<sup>141</sup>Tr. 474-76.

<sup>142</sup>*Id.* at 476-77.

Facility, but rather hired a bidder that was at the very highest end of the range because CPV felt that the winning bidder would build the best possible facility.<sup>143</sup>

Exports Of Electricity. Mr. Broemmelsiek responded to a public witness concern that the Facility would generate electricity that would be exported to other states.<sup>144</sup> He noted that Virginia currently imports about 20% of its power. While about 12% of this total is imported from Mt. Storm, which is a Dominion Virginia Power plant in West Virginia, the remaining 8% is imported from Kentucky, Tennessee, Ohio, and Pennsylvania. Mr. Broemmelsiek stated that one of the reasons CPV decided to locate a power plant in Virginia was that no plants had been built in the Commonwealth in approximately ten years, with the exception of a few peakers by Dominion Virginia Power and Old Dominion Electric Cooperative, and that power demand had risen by about 28% from 1990 to 2000. Mr. Broemmelsiek testified that the Facility will produce power that is consumed in the Commonwealth. Mr. Broemmelsiek further testified that if new plants are not built, the major utilities in the Commonwealth will continue to have a dominant market power position, and competition will not be achieved.<sup>145</sup>

Mr. Broemmelsiek also disputed the statement made by a public witness that power plants are currently being proposed in the Commonwealth because other states, such as Connecticut, do not permit the siting of new plants within their borders.<sup>146</sup> Mr. Broemmelsiek refuted this claim by stating that he was personally involved in power plant development in Massachusetts and Connecticut, and that since 1998 a total of seven plants have been built or are nearing construction in Massachusetts, and seven plants have been constructed or are nearing construction in Connecticut.<sup>147</sup>

Impact On School Tax Formula. Mr. Broemmelsiek addressed a public witness concern that the construction of the Facility would have a negative impact on the area by decreasing the amount of money earmarked for local schools.<sup>148</sup> Mr. Broemmelsiek stated that this is a very complicated calculation, and depends on an accurate prediction of future economic growth in Fluvanna County as compared to economic growth in the Commonwealth generally. Mr. Broemmelsiek explained that CPV analyzed this issue and concluded that if one assumes that Fluvanna County and the Commonwealth economically grow at the same rate, the net effect of CPV's \$1.9 million property tax payments to the County would be to affect local school funding in the \$400,000 range. Mr. Broemmelsiek noted that the comment made by Mr. Goodenough (*supra* at p. 21) that funding would be diminished by 75 or 80% was therefore incorrect.<sup>149</sup>

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<sup>143</sup>*Id.* at 478-79.

<sup>144</sup>*Id.* at 323-29.

<sup>145</sup>*Id.* at 480-82.

<sup>146</sup>*Id.* at 341.

<sup>147</sup>Tr. at 484.

<sup>148</sup>*Id.* 334-42.

<sup>149</sup>*Id.* at 483-84.

### 3. *Sellars Testimony*

Mr. Sellars' testimony focused on concerns raised at the Initial Hearing concerning cumulative air impacts from existing and proposed power plants, including CPV's Facility. In prefiled testimony and at the Second Hearing,<sup>150</sup> Mr. Sellars addressed the PSD permitting process and the cumulative impacts analyses conducted by DEQ, Tenaska, and CPV. He also responded to the testimony of Mr. Holmes and Dr. Smith, and addressed air quality concerns raised by Commissioner Moore in his dissenting opinion in the *Tenaska* proceeding.

*PSD Permitting Process.* Mr. Sellars testified that Fluvanna County is in attainment with the National Ambient Air Quality Standards ("NAAQS") for all criteria pollutants, including ozone, CO, nitrogen dioxide ("NO<sub>2</sub>"), SO<sub>2</sub>, and particulate matter.<sup>151</sup> Mr. Sellars testified that because CPV's proposed Facility will be located in an attainment area for all criteria pollutants, CPV is required to obtain an air permit from DEQ under the PSD permitting process.<sup>152</sup> To obtain a PSD permit, CPV is required to demonstrate that the Facility will minimize emissions through application of BACT and that it will not cause or contribute to a violation of applicable NAAQS<sup>153</sup>

Mr. Sellars testified that, on March 12, 2002, DEQ issued a draft PSD permit for CPV's review and comment. Under the terms of the draft permit, emissions of NO<sub>x</sub> from CPV's Facility cannot exceed 2.5 ppm while the Facility is operating at full load. According to Mr. Sellars, this draft permit represents the lowest emission rate for NO<sub>x</sub> ever licensed in Virginia.<sup>154</sup> The permit also requires the Facility to run exclusively on natural gas (meaning that oil will not be utilized as a backup fuel) and to employ state-of-the-art combustion technology, a Selective Catalytic Reduction system to control NO<sub>x</sub> emissions, and an oxidation catalyst to control CO emissions. According to Mr. Sellars, the project's emissions will be extraordinarily low when compared to existing power generation facilities in Virginia. The Facility's emissions of NO<sub>x</sub> and SO<sub>2</sub> will be at least 50 times less than the NO<sub>x</sub>/SO<sub>2</sub> emissions from the Bremono Bluff plant, which has less than half the power output of CPV's Facility.<sup>155</sup> Mr. Sellars testified that the public is entitled to review and comment on CPV's draft PSD permit before DEQ issues a final permit.<sup>156</sup>

According to Mr. Sellars, CPV is not required under the PSD program to conduct a cumulative, or multi-source, modeling analysis because CPV demonstrated, using DEQ-approved dispersion modeling techniques, that all of the predicted maximum air quality impacts are below the applicable significant impact levels ("SILs"). Therefore, no further analysis was required by DEQ.<sup>157</sup> In light of the concerns raised over cumulative air quality impacts at the Initial Hearing, however, CPV performed a cumulative impacts analysis to evaluate the potential air quality impacts from its own emission sources and from all proposed facilities near the Facility, as described below.

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<sup>150</sup>Mr. Sellars' Prepared Supplemental Testimony was designated as Ex. 26.

<sup>151</sup>Ex. 26, at 5; Tr. at 504.

<sup>152</sup>Ex. 26, at 9.

<sup>153</sup>*Id.* at 3-4.

<sup>154</sup>Tr. at 536-37.

<sup>155</sup>Ex. 26, at 4-5.

<sup>156</sup>*Id.*

<sup>157</sup>Ex. 26, at 9-10; Tr. at 500-01, 505.

The results of that analysis are shown graphically in Attachment 1 hereto, and discussed later in this Report.

#### **4. *Vidas Testimony***

Mr. Vidas began his testimony by introducing into the record his prepared supplemental testimony.<sup>158</sup> Mr. Vidas' testimony summarized the conclusions of the Displacement Report that EEA prepared on behalf of CPV.

*The Displacement Report.* Mr. Vidas testified that 19 new gas-fired generation projects have been proposed in Virginia, including CPV's Facility in Fluvanna County. He explained that these new plants will be among the cleanest fossil fuel plants ever built. The plants will use low emission combustion technologies and highly effective post-combustion emission control technologies, and will be extremely efficient, further reducing the emissions per unit of useful electricity. Mr. Vidas testified the new gas-fired combined-cycle plants are 100 times lower in NO<sub>x</sub> emissions and 1,000 times lower in SO<sub>2</sub> emissions per MWh than the current average for existing power plants in the Commonwealth. Mr. Vidas further testified that, despite the positive environmental profile associated with gas-fired plants, concern has been raised with regard to the cumulative emissions impacts of the proposed projects, if all of the proposed projects are in fact built, particularly if the plants export power to other states. To address these concerns, Mr. Vidas stated that CPV requested EEA to conduct an analysis to evaluate the potential emissions impacts of these proposed plants, the displacement of existing, higher emitting generation, with the gas-fired plants proposed to be sited in Virginia, and whether such displacement will result in a significant emissions benefit for Virginia.<sup>159</sup>

Mr. Vidas summarized the Displacement Report by explaining that if no new power plants are built in Virginia, the growth in electricity demand will be met by existing coal and heavy oil-fired plants. If the new gas-fired plants are built, however, they will displace generation from these existing plants, especially the heavy oil-fired plants. Mr. Vidas testified by explaining that while the old plants may not be shut down, some of the plants will generate less electricity because of the addition of the new gas-fired plants. Because the new plants are many times cleaner than any existing fossil-fueled plants in Virginia, Mr. Vidas testified that their displacement of generation produced by existing plants will create significant emission reductions. The results of that analysis are shown in Attachment 2 hereto.

#### **C. Evidence Presented By The Commission Staff At The Second Hearing**

On April 9, 2002, Mr. Abbott submitted prefiled supplemental testimony on behalf of the Commission Staff.<sup>160</sup> Mr. Abbott stated that the Staff had no comments regarding CPV's supplemental testimony because CPV had adequately addressed the issues raised in the Hearing Examiner's Report and there was nothing in the record that would cause Staff to alter its original

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<sup>158</sup>Ex. 33.

<sup>159</sup>Ex. 33, at 1-2.

<sup>160</sup>By ruling dated April 4, 2002, I granted the Staff's motion to extend the filing date for its supplemental testimony from April 5 to April 9, 2002. Mr. Abbott's prefiled supplemental testimony was marked as Ex. 35.

recommendation. Mr. Abbott concluded that CPV's Facility satisfied the criteria delineated in § 56-265.2 and § 56-580 D of the Code.<sup>161</sup>

#### **D. Letters Submitted By DEQ Following The Initial Hearing**

John M. Daniel, Jr., Director of Air Program Coordination for DEQ, submitted two letters to the Commission following the initial hearing, and commenting on CPV's proposed Facility. By letter dated April 15, 2002, Mr. Daniel stated that, "[f]rom an environmental standpoint, the CPV proposed project is one of the best that we have seen."<sup>162</sup> Mr. Daniel explained that CPV's Facility "will be cleaner than most combined cycle turbine facilities, because CPV will use natural gas as its primary fuel, have no backup oil firing, and will use an air cooling process that requires much less water than conventional cooling systems," in addition to installing "a catalyst system for both CO and VOC reductions."<sup>163</sup> Further, Mr. Daniel stated that "CPV was below the numerical 'significant impact level' for all pollutants that EPA defines for the prevention of significant deterioration (PSD) permit program."<sup>164</sup> With respect to Mr. Vidas' Displacement Report, Mr. Daniel confirmed that "his analysis is a reasonable way to look at the issue."<sup>165</sup>

On April 22, 2002, Mr. Daniel submitted a "follow-up" to his letter dated April 15, 2002.<sup>166</sup> In his second letter, Mr. Daniel stated that "DEQ has reviewed the cumulative impacts analysis undertaken by TRC Environmental Corporation in connection with CPV's project" and "finds TRC's methodology to be a reasonable approach."<sup>167</sup> Mr. Daniel stated that the results of CPV's cumulative impacts analysis showed that "there would be only minimal increases in air quality levels of sulfur dioxide, nitrogen oxides, carbon monoxide, particulate matter, and ozone," and that predicted concentrations of these pollutants "are well below the health based standards."<sup>168</sup> Mr. Daniel determined that "TRC's analysis further demonstrates that CPV's project, alone or in combination with other proposed projects in Fluvanna County and the surrounding counties, will have a negligible impact on air quality."<sup>169</sup> Mr. Daniel concluded by stating that "CPV and DEQ have adequately addressed the issue of cumulative air quality impacts with respect to CPV's Cunningham Creek project."<sup>170</sup>

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<sup>161</sup>Ex. 35, at 2.

<sup>162</sup>Letter from Mr. John M. Daniel, DEQ Director of Air Program Coordination, to Mr. Joel Peck, Clerk of the SCC (Apr. 15, 2002) at 1. This letter was designated as Ex. 21.

<sup>163</sup>*Id.*

<sup>164</sup>*Id.* at 1-2.

<sup>165</sup>Ex. 21, at 1.

<sup>166</sup>Letter from Mr. John M. Daniel, DEQ Director of Air Program Coordination, to Mr. Joel Peck, Clerk of the SCC (Apr. 22, 2002). This letter was marked as Ex. 20.

<sup>167</sup>*Id.*

<sup>168</sup>*Id.*

<sup>169</sup>Ex. 20.

<sup>170</sup>*Id.*

## **V. EVIDENCE SUBMITTED AFTER THE SECOND HEARING**

On May 6, 2002, CPV filed a motion to reopen the record for the limited purpose of submitting additional prepared testimony by Mr. Broemmelsiek. CPV stated in its motion that, subsequent to the Second Hearing, the Commission issued an order in Case No. PUE-2001-00430 remanding the CPCN application of Mirant Danville, LLC (“Mirant”) to the hearing examiner for further proceedings because, among other things, Mirant had signaled its intent to defer the construction of its proposed facility indefinitely while it negotiated with other entities to take over the development of the project. CPV stated that because several public witnesses argued that CPV does not intend to construct and operate the Facility, good cause existed to reopen the record on the limited issue of CPV’s intent to construct and operate the Facility. On May 17, 2002, I issued a ruling granting CPV’s motion.

In his additional supplemental testimony, Mr. Broemmelsiek asserted without reservation that CPV intends to develop, own, and operate the Facility. He testified that any confusion as to this point may relate to a misunderstanding that the public witnesses have with respect to the various financing options that CPV Inc. has with respect to the Facility. Mr. Broemmelsiek explained that CPV Inc. plans to obtain approximately 40-50% of the project capitalization from debt that is secured by the Facility, and has various options available to obtain the additional financing. Under one option, Warburg Pincus, the majority shareholder in CPV Holdings that has currently committed \$51 million to CPV Inc., could increase its equity participation in CPV to an amount that would satisfy the remaining financing for the Facility.

Under another option, CPV Inc. could obtain the remaining 50-60% equity by taking on as an equity investor a company that is experienced in the business of owning and running power plants. Mr. Broemmelsiek testified that to implement such an investment, CPV Holdings would sell an interest in the project company’s holding company (*i.e.*, Cunningham Creek Inc.) to another large, reputable entity in the business of owning and running power plants. Mr. Broemmelsiek explained that prospective investors under this scenario would include the large, publicly traded power generation companies; such investors could be either regulated electric utility subsidiaries in the business of providing non-regulated generation regionally or nationwide, or a non-utility generator that owns generation regionally or nationwide. Mr. Broemmelsiek clarified that, under any of these scenarios, CPV will continue to be the owner and operator of the Facility, and will continue to hold and be subject to all permits and approvals issued with respect to the project (including the CPCN). Mr. Broemmelsiek also testified that it is common in the electric power industry for equity to be raised from a variety of sources, including investments from other companies in forming a partnership relationship and the sale of equity ownership in either the project company or an upstream owner of the project company.

Finally, Mr. Broemmelsiek stated that CPV’s proposal is different from that of Mirant’s in that Mirant has acknowledged that it will not be the entity that constructs and operates the facility that is the subject of its CPCN application. By contrast, Mr. Broemmelsiek explained that CPV will continue to be the entity that constructs and operates the Facility, whether or not additional equity investors acquire an interest in CPV or Cunningham Creek Inc.



## **VI. DISCUSSION**

### **A. Statutory Standard**

The application in this case was filed prior to January 1, 2002, and accordingly, CPV sought approval under, and offered evidence to support, the findings required by Virginia Code § 56-265.2 B. The Virginia Electric Utility Restructuring Act,<sup>171</sup> however, mandated that “[o]n and after January 1, 2002, the generation of electric energy shall no longer be subject to regulation under this title [Title 56 Public Service Companies] except as specified in this chapter [The Restructuring Act].”

The Commission has held that the provisions of the Restructuring Act operate to supplant the requirements for approval contained in Code §§ 56-234.3 and 56-265.2 on and after January 1, 2002.<sup>172</sup> Specifically, the Commission found:

[Section] 56-580 D is designed to replace § 56-265.2 with respect to generation. Specifically, much of the text of § 56-580 D that authorizes the Commission to permit the construction of generating facilities is drawn virtually verbatim from § 56-265.2 B. The material difference is that § 56-580 D requires only two of the three findings required under § 56-265.2 B, eliminating the requirement that a proposed facility will have no material adverse effect upon the rates paid by customers of any regulated public utility in the Commonwealth (footnotes omitted).<sup>173</sup>

Thus, this project no longer requires approval under § 56-265.2, an exemption from Chapter 10, or interim authority to make financial expenditures for preliminary but limited site work. Approval however is required under Section 56-580 D which provides in applicable part:

D. The Commission shall permit the construction and operation of electrical generating facilities upon a finding that such generating facility and associated facilities (i) will have no material adverse effect upon reliability of electric service provided by any regulated public utility and (ii) are not otherwise contrary to the public interest. In review of a petition for a certificate to construct and operate a generating facility described in this subsection, the Commission shall give consideration to the effect of the facility and associated facilities on the environment and establish such conditions as may be desirable or necessary to minimize adverse environmental impact as

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<sup>171</sup>Virginia Code § 56-576 *et seq.*

<sup>172</sup>*Commonwealth of Virginia at the relation of the State Corporation Commission Ex Parte: In the matter of amending filing requirements for applications to construct and operate electric generating facilities*, Case No. PUE010313, Order dated August 3, 2001 (“*Filing Requirements*”).

<sup>173</sup>*Id.* at 4.

provided in § 56-46.1. *In order to avoid duplication of governmental activities, any valid permit or approval required for an electric generating plant and associated facilities issued or granted by a federal, state or local governmental entity charged by law with responsibility for issuing permits or approvals regulating environmental impact and mitigation of adverse environmental impact or for other specific public interest issues such as building codes, transportation plans, and public safety, whether such permit or approval is prior to or after the Commission's decision, shall be deemed to satisfy the requirements of this section with respect to all matters that (i) are governed by the permit or approval or (ii) are within the authority of, and were considered by, the governmental entity in issuing such permit or approval, and the Commission shall impose no additional conditions with respect to such matters.*<sup>174</sup>

Section 56-46.1 also requires that the Commission:

shall give consideration to the effect of that facility on the environment and establish such conditions as may be desirable or necessary to minimize adverse environmental impact. *In order to avoid duplication of governmental activities, any valid permit or approval required for an electric generating plant and associated facilities issued or granted by a federal, state or local governmental entity charged by law with responsibility for issuing permits or approvals regulating environmental impact and mitigation of adverse environmental impact or for other specific public interest issues such as building codes, transportation plans, and public safety, whether such permit or approval is prior to or after the Commission's decision, shall be deemed to satisfy the requirements of this section with respect to all matters that (i) are governed by the permit or approval or (ii) are within the authority of, and were considered by, the governmental entity in issuing such permit or approval, and the Commission shall impose no additional conditions with respect to such matters.* In every proceeding under this subsection, the Commission shall receive and give consideration to all reports that relate to the proposed facility by state agencies concerned with environmental protection; and if requested by any county or municipality in which the facility is proposed to be built, to local comprehensive plans that have been adopted pursuant to Article 3 (§ 15.2-2223 et seq.) of Chapter 22 of Title 15.2. Additionally, the Commission (i) shall consider the effect of the proposed facility on economic development within the Commonwealth and (ii) shall consider any improvements in service reliability that may result from the construction of such facility.

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<sup>174</sup>Virginia Code §§ 56-580 D and 56-46.1 were amended effective July 1, 2002. The added language is show in italics.

The Commission summarized those requirements in January of 2002, and concluded that it:

- (a) shall consider the impact of the facility on the environment.
- (b) shall establish conditions that may be desirable or necessary to minimize any adverse environmental impacts resulting from the facility.
- (c) shall receive and give consideration to all reports that relate to the proposed facility by state agencies concerned with environmental protection, and, if requested by any county or municipality in which the facility is proposed to be built, to local comprehensive plans that have been adopted pursuant to Article 3 (§ 15.2-2223 et seq.) of Chapter 22 of Title 15.2.
- (d) shall consider any improvements in service reliability that may result from the construction of such facility.
- (e) may consider the effect of the proposed facility on economic development within the Commonwealth.<sup>175</sup>

Finally, § 56-596 A is also applicable, and requires that: “[i]n all relevant proceedings pursuant to this Act, the Commission shall take into consideration, among other things, the goals of advancement of competition and economic development in the Commonwealth.”

The Commission has specifically addressed the statutory criteria and the findings that must be made, in several cases, and in some detail in *Tenaska*.<sup>176</sup> Therein the Commission considered reliability, competition, rates, environment, economic development, and the public interest. A finding that a proposed facility would have no material adverse effect upon the rates paid by customers of any regulated utility in Virginia was historically required under Virginia Code § 56-265.2 B(i). Although that Code section is no longer applicable to approval of electric generation facilities as is proposed herein, in the *Tenaska* Remand Order the Commission noted that the impact on rates “may also be considered as part of the public interest finding we must make under § 56-580 D(ii) of the Code.”<sup>177</sup>

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<sup>175</sup>Tenaska Remand Order.

<sup>176</sup>*Application of Tenaska Virginia Partners, L.P. for approval of a certificate of public convenience and necessity pursuant to Virginia Code § 56-265.2, an exemption from Chapter 10 of Title 56, and interim approval to make financial commitments and undertake preliminary construction work*, Case No. PUE010039 (“*Tenaska*”), Remand Order (January 16, 2002) and Final Order (April 19, 2002); *Application of Mirant*, Case No. PUE-2001-00430, Remand Order (April 29, 2002); *Application of CINCAP*, Case No. PUE-2001-00169, Remand Order (April 29, 2002) and Order on Reconsideration (June 5, 2002); *Application of Kinder Morgan Virginia*, Case No. PUE-2001-00423, Remand Order (April 29, 2002).

<sup>177</sup>Tenaska Remand Order at 16.

In an *ODEC* case, the Commission recently confirmed that those six criteria or areas of analyses continue to be applicable to electric generating plant applications.<sup>178</sup> Recent amendments to the relevant statutes also continue to impose the obligation on the Commission to "give consideration to the effect of that facility on the environment and establish such conditions as may be desirable or necessary to minimize adverse environmental impact" but place limitations on the scope of that review "[i]n order to avoid duplication of governmental activities." Specifically, any approval by another agency charged by law with responsibility to regulate environmental impact shall be deemed to satisfy the requirements of §§ 56-580 D and 56-46.1 "with respect to all matters that (i) are governed by the permit or approval or (ii) are within the authority of, and were considered by, the governmental entity in issuing such permit or approval." In such case, "the Commission shall impose no additional conditions with respect to such matters."<sup>179</sup>

In the ODEC Final Order approving a generation facility, the Commission also found that receipt of an air permit from the DEQ satisfied the statutory criteria with respect to air emissions. It held that:

effective July 1, 2002, § 56-46.1 A provides, among other things, that permits regulating environmental impact and mitigation of adverse environmental impact shall be deemed to satisfy the requirements of such section with respect to all matters that are governed by the permit. ODEC filed a copy of its Stationary Source Permit to Construct and Operate issued by the DEQ, which governs air emissions by the proposed facilities.<sup>180</sup>

Judge Moore issued a concurring opinion in which he found:

I concur with my colleagues in the decision to approve the construction and operation of the ODEC facility. I do so because the Applicant has been issued a permit by the DEQ that governs certain emissions of the proposed facility. The permit is specific in addressing the matters that would cause me to deny the application without further data and analyses.<sup>181</sup>

The applicant, of course, will continue to have the burden to offer evidence to clearly define the scope of review undertaken by another agency in its permitting process.

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<sup>178</sup> *Application of Old Dominion Electric Cooperative*, Case No. PUE-2001-00303 ("*ODEC*"), Final Order dated July 17, 2002 ("ODEC Final Order").

<sup>179</sup> Va. Code § 56-46.1

<sup>180</sup> ODEC Final Order at 6.

<sup>181</sup> *Id.*

## **B. Reliability**

The first criteria that must be considered is the effect of the proposed project on the reliability of electric service provided by any regulated electric public utility. "[T]he Commission must find that the proposed Facility and associated facilities will have no material adverse effect... the Commission shall also consider any improvements in service reliability that may result."<sup>182</sup>

The record is clear that the proposed Facility will have no material adverse effect on electric service reliability. Dominion Virginia Power completed a facilities study and determined that the proposed project will have no impact on the reliability of its system.<sup>183</sup> The Facility will interconnect with the 230 kV Bremono-Charlottesville #2028 transmission line owned by Dominion Virginia Power. Electrical connection lines and bus towers will be necessary to connect the Facility to the existing line. Staff witness Abbott agreed that the proposed interconnection will not adversely impact Dominion Virginia Power's reliability.<sup>184</sup>

The Commission may also consider any improvements in service reliability that may result from a proposed project. No evidence was presented that this project would enhance the reliability of service by Dominion Virginia Power, but such a showing is not critical for certification.

## **C. Competition**

Staff testified that this Facility will operate as a merchant plant and will add 520 MW of capacity within the control area of the incumbent, Dominion Virginia Power. Staff explained that market power and ownership or control of generating capacity generally are positively correlated. Therefore, competition is benefited by the construction and operation of generation that is owned or controlled by a company other than the incumbent as is the case here. Staff witness Carsley testified that the addition of such capacity has a desirable effect on competition. He, however, also observed that certain aspects of the power industry make it possible for some firms to have market power even if they do not control a large amount of capacity in a region. He recommended that the Commission require CPV to report changes in its business plan particularly as they might be related to changes in equity ownership in this project. CPV did not object, and I find that recommendation to be reasonable.

## **D. Rates**

The Commission has also considered the impact of a proposed project on the rates of regulated public utilities in Virginia.<sup>185</sup> The record is again clear that this Facility will not have an adverse effect on the rates of any Virginia regulated utility. CPV will bear the cost of interconnection with Dominion Virginia Power. The Facility will be fueled by natural gas

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<sup>182</sup>Tenaska Remand Order at 13.

<sup>183</sup>Exhibit CB-2, at 4.

<sup>184</sup>Exhibit GLA-7, at 4.

<sup>185</sup>ODEC Final Order at 6.

purchased on the spot market and delivered by Transco's interstate pipeline. There will thus be no adverse impact on the rates of any Virginia regulated electric or natural gas public utility.

Staff witness Abbott testified that the LMSC system has ample water supply to serve the Facility without negatively impacting its water rates or reliability. The Facility will employ air-cooled condensers to greatly reduce the amount of water required. Additionally, on-site water storage will provide sufficient supply for 77 days of plant operation that will allow the Facility to tolerate long service interruptions from LMSC during periods of low flow in the Rivanna River, and yet, continue operation. Staff witness Abbott recommended that the water service available to the Facility be specifically limited to interruptible service. CPV had no objection.

The Facility is expected to have a beneficial impact on the wastewater service rates of LMSC. The existing wastewater treatment facility is nearing its maximum capacity, and will soon require upgrading, whether LMSC serves the CPV project or not. CPV has agreed to finance construction of sufficient improvements to handle all wastewater generated by the Facility. Therefore, Mr. Abbott concluded that the LMSC customers will benefit from CPV's willingness to finance improvements that they would otherwise have to pay for through their rates. I agree.

## **E. Environmental Impact**

The impact of a proposed facility on the environment has continued to be of great concern to the Commission. This report and its recommendations, however, are preceded by a change in the Commission's statutory oversight in this area. The 2002 General Assembly passed legislation ("SB 554") to amend Virginia Code §§ 56-580 D and 56-46.1 to avoid duplication of efforts by governmental agencies. Although the Commission continues to be concerned with the cumulative impact of a facility, the DEQ governs air emissions, and its issuance of a permit has been deemed to satisfy the statutory criteria with regard to such emissions. On March 12, 2002, the DEQ issued a draft air permit and therefore, CPV may have received its final permit by now, but it is not a part of this record. The Applicant, however, did provide very thorough analyses of the cumulative impact of the proposed project combined with all other existing and proposed electric generation facilities on the air quality in and around Fluvanna County. The Applicant also produced an analysis to estimate the future impact on air quality resulting from the operation of the new generation facilities. Witnesses discussed the results of the analyses and concerns expressed by others in great detail. The record herein demonstrates that this project even in combination with other existing and proposed generation facilities will not have a significant impact on air quality in and around Fluvanna County.

### *1. Air Quality*

Cumulative Impact Analyses Relating To CPV's Facility. Mr. Sellars testified that, in addition to CPV's own analysis, DEQ and Tenaska each conducted a cumulative impacts analysis that relates to CPV's Facility.<sup>186</sup> According to Mr. Sellars, the three analyses demonstrate that CPV's Facility, alone or in combination with other proposed power plants, will not cause or contribute to adverse cumulative impacts that would violate the applicable NAAQS, or otherwise

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<sup>186</sup>Tr. at 499-500.

cause or contribute to significant deterioration of air quality in Fluvanna County and surrounding areas.<sup>187</sup> In comparing the analyses, Mr. Sellars testified that Tenaska evaluated the impact of 23 proposed power plants focusing on the criteria pollutants NO<sub>x</sub>, SO<sub>2</sub>, CO, and PM<sub>10</sub>, whereas DEQ evaluated the impacts of 16 proposed power projects (including CPV's Facility) on worst-case regional ozone concentrations. In addition, Tenaska's report scaled DEQ's modeling to account for 23 proposed projects (up from the 16 proposed projects that DEQ evaluated). CPV's analysis focuses on the potential cumulative impacts of the proposed power plants to be constructed within approximately 50 kilometers of CPV's Facility.<sup>188</sup>

*DEQ's Analysis:* According to Mr. Sellars, DEQ's cumulative impacts analysis demonstrated there would be no significant change to predicted ozone levels, even conservatively assuming the worst-case scenario in which the total emissions modeled were the maximum amounts allowed by permits. Whereas the one-hour ozone standard is 120 parts per billion ("ppb") and the proposed eight-hour ozone standard is 80 ppb, DEQ's analysis determined that the maximum predicted change to ozone levels from the 16 proposed power plants would be approximately 2.5 ppb. The predicated change was shown to be less than 1 ppb in the Northern Virginia ozone non-attainment area, and even less than 1 ppb in other areas of Virginia. Mr. Sellars testified that the accuracy of DEQ's model is plus or minus 10 ppb, meaning that the predicted change in ozone levels would be less than either the accuracy of the model or the monitoring devices used to measure the ozone concentrations.<sup>189</sup> DEQ's cumulative impacts analysis indicates that the predicted air quality impacts of the 16 proposed power plants on ozone levels are insignificant.<sup>190</sup>

DEQ's analysis did not take into account the NO<sub>x</sub> emission reductions that will occur through the NO<sub>x</sub> "SIP Call," which Mr. Sellars stated is a cap and trade allowance system that will reduce NO<sub>x</sub> emissions from Virginia sources.<sup>191</sup> Under the SIP Call, EPA has established a summertime cap on NO<sub>x</sub> emissions from electric generating units and large industrial boilers at levels considerably lower than current emissions. Compliance is required by May 2004, which is approximately when CPV's Facility is scheduled to commence operations. The NO<sub>x</sub> SIP Call is expected to reduce NO<sub>x</sub> emissions by more than 60% in the summer ozone season and, as a result, ozone formation and visibility impacts related to ozone should be reduced significantly. Mr. Sellars testified that both Tenaska's and CPV's Facility will be subject to the SIP Call and thus required to obtain allowances under the overall cap, but DEQ did not take credit for the future reductions in NO<sub>x</sub> emissions to ensure a conservative analysis.<sup>192</sup>

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<sup>187</sup>Ex. 26, at 3; Tr. at 499

<sup>188</sup>Ex. 26, at 11-12.

<sup>189</sup>Tr. at 500.

<sup>190</sup>Ex. 26, at 16-18.

<sup>191</sup>Ex. 26, at 17; Tr. at 501.

<sup>192</sup>Tr. at 501-02. Mr. Sellars testified that, under Virginia law, any facility that commences operation from January 1, 1998 to January 1, 2009, will share in a total new unit set-aside of 5% of the total NO<sub>x</sub> budget (855 tons). Existing and new large electric generating units must operate within the overall NO<sub>x</sub> allocation budget (16,236 tons). In that respect, new power plant development will not and cannot cause the NO<sub>x</sub> budget cap to be exceeded, and thus will provide a viable means by which Virginia can meet its energy needs while maintaining compliance with the cap. Ex. 26, at 22.

*Tenaska's Analysis:* Mr. Sellars testified that Trinity Consultants ("Trinity") conducted a cumulative impacts analysis on behalf of Tenaska.<sup>193</sup> Trinity's analysis evaluated cumulative emissions of PM<sub>10</sub>, CO, SO<sub>2</sub>, and NO<sub>x</sub> from 23 proposed plants (including CPV's Facility), assuming that all of the plants were constructed and simultaneously operated to their maximum NO<sub>x</sub> emission rates.<sup>194</sup> Trinity also scaled DEQ's 16-plant ozone analysis to predict cumulative ozone impacts from the 23 proposed plants.<sup>195</sup> Trinity's analysis took into account existing air quality in the area surrounding Tenaska's project (located approximately two miles from CPV's proposed site) and added a conservative estimate of the "worst-case" background air quality data from DEQ.

According to Mr. Sellars, Trinity's analysis demonstrated that the cumulative impacts of all 23 proposed plants operating simultaneously at their maximum emission rates, added to the highest observed background of concentrations from representative monitors, would have little impact on air quality. Specifically, the maximum combined impacts on air quality in Fluvanna County from all 23 power plants were below the single source SILs for all pollutants, and the combined impacts in Fluvanna County would be far below the applicable PSD increments and would not cause or contribute to a violation of the NAAQS in the County or elsewhere. In Mr. Sellars' opinion, Trinity's analysis demonstrates that proposed new power plant development will not cause or contribute to the significant deterioration of air quality in Fluvanna County and the surrounding areas.<sup>196</sup>

According to Mr. Sellars, Trinity's analysis conservatively overstated the magnitude of the air quality impacts from the 23 proposed power plants. Like the DEQ analysis, Trinity's analysis did not account for the substantial NO<sub>x</sub> emission reductions that are expected to occur as a result of the NO<sub>x</sub> SIP Call,<sup>197</sup> nor did Trinity account for emissions reductions that will occur under a variety of other federal and state initiatives, including the Acid Rain Program and the Regional Haze Regulations. Additionally, Trinity modeled 23 proposed projects, notwithstanding that many of the proposed projects likely will not be constructed. Trinity also used the EPA-approved Industrial Source Complex ("ISC") model that takes into account topography and meteorology to predict worst-case ground-level background concentrations of pollutants. Finally, Mr. Sellars testified that Trinity's analysis did not account for the displacement of emissions from less efficient, higher-emitting units by new gas-fired power plants, which should result in lower overall emissions when compared to a "no new plant" scenario.

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<sup>193</sup>Tenaska's cumulative impacts analysis is discussed in detail in the *Report On Remand of Michael D. Thomas, Hearing Examiner*, Case No. PUE010039 (Apr. 3, 2002).

<sup>194</sup>Tr. at 502.

<sup>195</sup>As in the *Tenaska* case, the total predicted one-hour ozone concentration does approach the NAAQS when added to the worst-case background level. See Ex. 26, Attachment 6, at 4-3; and Attachment 1 hereto.

<sup>196</sup>Ex. 26, at 14.

<sup>197</sup>Tr. at 502-03; Ex. 26, at 12-15.



*CPV's Analysis:* Mr. Sellars testified that, in response to the Hearing Examiner's Ruling of February 22, 2002, CPV asked TRC to review the cumulative impacts analyses performed by DEQ and Tenaska and prepare a third, independent cumulative impacts analysis.<sup>198</sup> Mr. Sellars stated that CPV's analysis took a more focused approach by considering only the proposed plants within 50 kilometers of CPV's proposed Facility.<sup>199</sup> Whereas Tenaska's analysis considered a broader array of power projects over a greater modeling domain, CPV's analysis concentrated more closely on the area where CPV's Facility will have its maximum impacts.<sup>200</sup>

More specifically, Mr. Sellars testified that the cumulative analysis was consistent with the DEQ-approved air modeling protocol and data used to support the Facility's PSD permit application. The modeling exercises used the same model receptor grid, meteorological data, and a representative set of source parameters used in the single source modeling contained in CPV's PSD application. With DEQ's assistance, TRC determined that four other proposed power plants are located within 50 kilometers of CPV's Facility: Tenaska projects in Fluvanna and Buckingham Counties, an ODEC project in Louisa County, and the proposed Kinder Morgan facility in Cumberland County.<sup>201</sup> Mr. Sellars testified that TRC obtained emissions data and the applicable modeling parameters from DEQ and other published sources, including Tenaska's cumulative impacts analysis, then modeled the cumulative impacts associated with the simultaneous operation of CPV's Facility and the four other sources for emissions of NO<sub>x</sub>, CO, SO<sub>2</sub>, and PM<sub>10</sub>.<sup>202</sup>

Mr. Sellars stated that CPV, like DEQ and Tenaska, applied extremely conservative assumptions with respect to each of the pollutants that it evaluated in the cumulative impacts analysis.<sup>203</sup> Mr. Sellars summarized those conservative assumptions by stating that CPV: (1) used the highest background data obtained anywhere in Virginia over the last three years; (2) applied the worst-case meteorological conditions (*i.e.*, conditions resulting in the highest concentrations of pollutants) for a five-year period; (3) assumed that all proposed plants within 50 kilometers of CPV's Facility would be built; (4) assumed that all facilities being modeled were operating at their maximum emitting rate (meaning, for example, that those plants permitted to burn oil were assumed to be burning oil); (5) assumed that this simultaneous operation would occur coincidentally with the worst-case meteorology and the highest observed background concentrations in Virginia; (6) used the EPA-approved ISC model, which is designed to overpredict impacts; (7) focused on a single receptor to observe the highest concentration; and (8) took no credit for any emission reduction programs that are in place, such as the NO<sub>x</sub> SIP Call, or for any emissions displacement.<sup>204</sup>

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<sup>198</sup>TRC's review and analysis are described in the report entitled "Evaluation of Potential Cumulative Air Quality Impacts at or Near the Proposed CPV Cunningham Creek, VA Facility," which is attached to Mr. Sellars' Testimony (Ex. 26) as Exhibit 8.

<sup>199</sup>Tr. at 503.

<sup>200</sup>Ex. 26, at 20-21.

<sup>201</sup>Tr. at 503.

<sup>202</sup>Ex. 26, at 19-20.

<sup>203</sup>Mr. Sellars introduced a series of charts depicting the maximum potential concentration for all of the criteria pollutants. These charts, which appear in CPV's cumulative impacts analysis, were designated as Ex. 27, and are attached to this report as Attachment 1. Mr. Sellars explained in more detail how these charts graphically represent the results of CPV's analysis. Tr. 503-07.

<sup>204</sup>Tr. 508-09.

A summary of the maximum potential cumulative impact follows:

**Summary of Maximum Potential Cumulative Concentrations<sup>205</sup>**

Pollutant	Averaging Period	Maximum Modeled Concentrations		Maximum Background Concentrations (ug/m <sup>3</sup> )	Maximum Cumulative Concentration		Class II Significance Level (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	PSD Class II Increment (ug/m <sup>3</sup> )
		CPV-CC Only (ug/m <sup>3</sup> )	All Sources (ug/m <sup>3</sup> )		CPV-CC Only (ug/m <sup>3</sup> )	All Sources (ug/m <sup>3</sup> )			
		A	B	C	A + C	B + C			
NO <sub>2</sub>	Annual	0.68	0.98	48	48.68	48.98	1	100	25
PM <sub>10</sub>	Annual	0.088	0.25	35	35.09	35.25	1	50	17
	24-Hour	3.31	4.65	86	89.31	90.65	5	150	30
SO <sub>2</sub>	Annual	0.019	0.45	29	29.02	29.45	1	80	20
	24-Hour	0.56	7.83	122	122.56	129.83	5	365	91
	3-Hour	1.53	47.94	351	352.53	398.94	25	1300	512
CO	8-Hour	25.16	33.47	6,984	7009.16	7017.47	500	10000	--
	1-Hour	58.79	67.45	11,523	11581.79	11590.45	2000	40000	--

The results of CPV's analysis demonstrate that the cumulative impacts of emissions from CPV's Facility and the other major power projects within 50 kilometers will be below the applicable PSD increments and, when considered with a conservative estimate of existing background air quality levels, will be within the NAAQS. This means that the cumulative impacts of all five power plants will not cause or contribute to any significant deterioration in air quality anywhere within 50 kilometers of CPV's Facility. In addition, Mr. Sellars testified that the cumulative impacts of all five projects will be below the single source SILs for most pollutants and averaging periods, indicating that the combined impacts of CPV's Facility and the other major power projects within 50 kilometers will not be significant for those pollutants.<sup>206</sup>

In sum, Mr. Sellars testified that the results of TRC's analysis are consistent with the results of both the Tenaska and DEQ analyses, in that all three studies conclude that, individually or cumulatively, the proposed power projects in and around Fluvanna County will not have a significant impact on the existing air quality and will not threaten attainment of the NAAQS or the PSD increments, or in most cases a single source SIL.<sup>207</sup>

*Responses To The Testimony Of Mr. Holmes And Dr. Smith.* During the Second Hearing, Mr. Sellars responded to points raised by Mr. Holmes and Dr. Smith on the issue of cumulative air quality impacts. First, to address Mr. Holmes' concern about the distance of the monitoring stations from the proposed site, Mr. Sellars explained that TRC set up a receptor grid around CPV's proposed site, consisting of hundreds of thousands of receptors, to capture data where the maximum impact would occur. To this on-site data, CPV added the highest observed concentrations in Virginia, which Mr. Sellars stated were a factor of two higher than DEQ's estimated concentrations for Fluvanna County. Nonetheless, CPV's analysis shows that the

<sup>205</sup>Ex. 26, Attachment 8, at 3-11.

<sup>206</sup>*Id.*

<sup>207</sup>Ex. 26, at 20-21.

cumulative impacts of all of the proposed facilities within 50 kilometers of CPV's Facility are not significant.<sup>208</sup>

Second, Mr. Sellars testified that, contrary to the testimony of Mr. Holmes and Dr. Smith, there is no unique topography around CPV's proposed Facility and, in any event, both Tenaska's and CPV's analyses took into account local terrain and topography. Mr. Sellars stated that the elevation of the receptors was a "critical input" into the model.<sup>209</sup>

Finally, Mr. Sellars challenged the validity of the ozone modeling study presented by Dr. Smith and cited by Mr. Holmes, which showed that, under stagnant conditions, the highest ozone concentrations will occur relatively close to the ground within a three-mile radius of the point source. Dr. Smith was unable to identify the model used in the study he cited; however, Mr. Sellars surmised that the model was a "box" model, which predicted a one-day measurement that amounted to the emissions of a year's worth of pollutants, with no wind to disperse the pollutants for the entire year.<sup>210</sup> Mr. Sellars found that the study erroneously predicted high measurements that have not been observed in nature and that are inconsistent with the results of the ozone modeling completed by the DEQ.<sup>211</sup> Moreover, Mr. Sellars testified that a member of his staff contacted Dr. Fuentes, the scientist represented by Dr. Smith and Mr. Holmes to be the source of the data. Mr. Sellars stated that he attempted to obtain the air quality data from Dr. Fuentes, but was informed that the data could not be released because it had not been subjected to peer review. Further, Dr. Fuentes was unaware that the data had been submitted to the SCC in a paper as authoritative by Dr. Smith.<sup>212</sup>

Comments On Commissioner Moore's Tenaska Dissent. Mr. Sellars also addressed several concerns pertaining to air quality raised by Commissioner Moore in his dissent from the majority's decision in the *Tenaska* proceeding.<sup>213</sup> First, Mr. Sellars agreed with Commissioner Moore's that pollution concentration levels below the NAAQS do, in fact, matter. He argued that the PSD program is designed to assure that unacceptable degradation of air quality in attainment areas (such as Fluvanna County) does not occur. According to Mr. Sellars, this objective is achieved through the PSD "increments," which represent the maximum allowable increase of a criteria pollutant's concentration anywhere in the atmosphere (beyond which an impermissible degradation to air quality has occurred).<sup>214</sup>

Second, Mr. Sellars addressed Commissioner Moore's concerns that (i) "for PM<sub>10</sub> and the eight-hour CO analyses, the background or current air quality is between 55% and 65% of the maximum allowed concentrations;"<sup>215</sup> and (ii) Tenaska "failed to explain why we should not be

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<sup>208</sup>Tr. at 510-12.

<sup>209</sup>*Id.* at 512.

<sup>210</sup>*Id.* at 518.

<sup>211</sup>*Id.* 513-16.

<sup>212</sup>*Id.* at 516-22.

<sup>213</sup>See *Application of Tenaska Virginia Partners, L.P.*, Case No. PUE-2001-00039, Final Order (Apr. 19, 2002), Dissent of Commissioner Moore ("Moore Dissent"). In his dissent (at 1), Commissioner Moore stated that his "disagreement is limited to the majority conclusions with respect to air quality."

<sup>214</sup>Tr. at 523; Ex. 26, at 7.

<sup>215</sup>Moore Dissent at 4.

concerned when concentration levels are 50% to 60% of the allowed limits . . . .”<sup>216</sup> Mr. Sellars testified that Tenaska’s analysis assumed a very conservative background pollution concentration levels which greatly overstated actual pollution levels in Fluvanna County.<sup>217</sup> CPV reported DEQ’s estimates of existing background concentrations for PM<sub>10</sub> and CO in Fluvanna County, and those estimates are much lower than Trinity’s conservative estimates.<sup>218</sup> According to Mr. Sellars, the background level in Fluvanna County for the 24-hour PM<sub>10</sub> standard is only 27% of the NAAQS, and the annual PM<sub>10</sub> concentrations are 36% of the NAAQS. The eight-hour CO estimate, in turn, is 23% of the NAAQS. Thus, in Mr. Sellars’ opinion, the existing PM<sub>10</sub> and CO concentrations in Fluvanna County are much more closely aligned in percentage to the NO<sub>2</sub>, SO<sub>2</sub>, and one-hour CO levels which show a range of current levels between 15% and 25% of the NAAQS.<sup>219</sup>

Third, Mr. Sellars addressed Commissioner Moore’s concern over the percentage of pollutants added to existing pollution levels, regardless of how close those levels were to the NAAQS. Mr. Sellars noted that with respect to most pollutants evaluated in CPV’s study, the cumulative impacts are well below the single source SILs (*i.e.*, at a level that would be characterized by DEQ and EPA as trivial). Next, Mr. Sellars explained that Tenaska apparently failed to effectively communicate the effect of spatial distribution in its modeling. According to Mr. Sellars, if a study shows that a maximum predicted concentration is 10% of existing background levels, this would not mean that air quality across the U.S. would degrade by 10%. Rather, the maximum predicted concentrations assumed in both Tenaska’s and CPV’s analyses are based on the single receptor that captures the maximum impact, and that maximum impact is used as a conservative surrogate for the air quality everywhere. In CPV’s analysis, for example, the maximum impacts for PM<sub>10</sub>, the eight-hour CO standard, and NO<sub>x</sub> fall exactly at the Facility’s fence line because those impacts are caused by the auxiliary burner, not by the main stacks of the Facility. This spatial impact area is well within CPV’s property boundaries. Mr. Sellars stated that the maximum predicted concentrations fall to orders of magnitude lower than the SIL once the concentrations are measured at distances a few hundred meters from the Facility. According to Mr. Sellars, the concentrations of pollutants that will, in fact, be observed outside CPV’s property boundaries will be well below the conservative maximum predictions used in Tenaska’s and CPV’s analyses.<sup>220</sup>

Mr. Sellars next addressed Commissioner Moore’s conclusion that Tenaska failed to consider adequately PM<sub>2.5</sub> or introduce monitoring data for PM<sub>2.5</sub> into the record. Mr. Sellars introduced DEQ’s regional summary of PM<sub>2.5</sub> monitoring data in Virginia for 2001, the most recent data available.<sup>221</sup> Mr. Sellars testified that the maximum annual concentrations of PM<sub>2.5</sub> range from 12 to 15.1 micrograms per cubic meter (“mg/m<sup>3</sup>”),<sup>222</sup> as compared to the proposed PM<sub>2.5</sub> NAAQS of 15 mg/m<sup>3</sup>. According to Mr. Sellars, Fluvanna County should be represented by monitors falling on

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<sup>216</sup>*Id.*

<sup>217</sup>Tr. at 523.

<sup>218</sup>See Ex. 26, Attachment 8, Table 3-3.

<sup>219</sup>Tr. at 524.

<sup>220</sup>Tr. at 524-26. To illustrate his point, Mr. Sellars cited Ex. 26, Attachment 8, Figures 2-1 through 2-3 (showing impacts at the Facility’s fence line and pollutant concentrations at distances away from the Facility’s fence line).

<sup>221</sup>DEQ’s “PM 2.5 Summary Data 2001” was designated as Ex. 30.

<sup>222</sup>Mr. Sellars noted that these concentrations appear in the column marked “Annual” and in the sub-column marked “Arith. Mean.” See Ex. 30.

the lower end of the 12 to 15.1 mg/m<sup>3</sup> spectrum, since it is a more rural county and is located in the Piedmont region.<sup>223</sup> Next, Mr. Sellars discussed the short-term, 24-hour PM<sub>2.5</sub> proposed standard. This standard is based on the second highest concentration observed by the monitoring network, since one exceedence is allowed before a violation is deemed to have occurred. The second highest maximum levels for the 24-hour sampling range was from 32 to 42 mg/m<sup>3</sup>,<sup>224</sup> as compared to the proposed NAAQS of 65 mg/m<sup>3</sup>. For the same reasons as noted above, Mr. Sellars stated that Fluvanna County should be expected to fall in the lower end of that spectrum.<sup>225</sup>

According to Mr. Sellars, the PM<sub>2.5</sub> program is in its infancy, having recently been upheld by the courts. Only now has DEQ begun to develop plans and procedures for evaluating the impacts of PM<sub>2.5</sub>, and Mr. Sellars estimates that the PM<sub>2.5</sub> program will not be implemented until 2007 at the earliest. Mr. Sellars stated that because PM<sub>2.5</sub>, like ozone, is a regional pollutant, most impacts from PM<sub>2.5</sub> result from the emissions of precursor pollutants that react chemically in the atmosphere. As with ozone, there will be no model to evaluate the impact of a single source, and models used to simulate the reactive process are currently in development and thus are not available for use at this time. Mr. Sellars noted, however, that the primary precursors for PM<sub>2.5</sub> are SO<sub>2</sub> and NO<sub>x</sub>, and he stated that construction of new gas-fired plants, like CPV's Facility, will displace older, dirtier plants and ultimately reduce the precursor pollutants. For this reason, Mr. Sellars advocated that CPV's Facility be viewed as an important part of the solution to PM<sub>2.5</sub> concentrations in the Commonwealth.<sup>226</sup>

Fifth, Mr. Sellars addressed Commissioner Moore's criticisms that Tenaska failed to provide data regarding the current levels for ozone based on the new eight-hour standard and failed to present evidence of the attainment designation of Fluvanna County under that standard. With respect to the first criticism, Mr. Sellars stated that DEQ's modeling of the highest one-hour increase in ozone, based upon the cumulative impacts of 16 proposed power plants, was 2.5 ppb. Mr. Sellars testified that, even if a 2.5 ppb increase was the predicted impact under the eight-hour standard, it is still a miniscule fraction of the proposed eight-hour ozone standard, which is 80 ppb.<sup>227</sup> With respect to the second criticism, Mr. Sellars introduced a list of localities recommended for ozone non-attainment designation by DEQ under the new standard.<sup>228</sup> This list indicates that DEQ has not recommended that Fluvanna County be designated as non-attainment for the new ozone standard.

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<sup>223</sup>Tr. at 527-58.

<sup>224</sup>These concentrations appear in the column marked "24-Hour Sampling" and in the sub-column marked "2nd Max." See Ex. 30.

<sup>225</sup>Tr. at 527-28.

<sup>226</sup>*Id.* at 528-30.

<sup>227</sup>Tr. at 530-32. Mr. Sellars testified that EPA has expressly stated that the NO<sub>x</sub> SIP Call will address attainment problems under the eight-hour ozone standard, as well as the one-hour standard. See 63 FR 57,356 at 57363-364, 57372 (Nov. 27, 1998) (designated Ex. 32).

<sup>228</sup>DEQ's list entitled "Recommended Localities for Ozone Nonattainment Designation" (Dec. 3, 2001) was designated as Ex. 31.

## *2. Displacement Study*

Mr. Vidas also presented a Displacement Report that projected operation of the new plants will reduce NO<sub>x</sub> emissions by 23% and SO<sub>2</sub> emissions by 13% in 2004 compared to a scenario under which no new plants are built. The Displacement Report also concluded that in 2010, the new plants will reduce air emissions of both NO<sub>x</sub> and SO<sub>2</sub> by approximately 45% compared to a scenario under which no new plants are built. Mr. Vidas concluded that on a “tons/year” basis, that same emission reduction benefit translates to 50,000 to 100,000 tons of SO<sub>2</sub> and 15,000 to 30,000 tons of NO<sub>x</sub>.<sup>229</sup>

According to Mr. Vidas, certain public witnesses have expressed concerns that the proposed gas plants may be used to export electricity to other states, thereby contributing to in-state emissions without providing Virginia residents with any additional electricity. Mr. Vidas stated that the Displacement Report concluded that Virginia is currently importing a significant amount of electricity, and that the new plants are likely to serve this in-state load before electricity is exported to other states. He also explained that the Displacement Report showed there is a significant amount of new generation being built in surrounding states that will serve load in those other states. He further testified that transmission lines to the Northeast markets are limited and there is a substantial amount of new generation proposed in the states between Virginia and the Northeast that would have better access to these markets than plants in Virginia. Finally, Mr. Vidas stated that the Displacement Report demonstrated that, even in those cases where electricity from the new plants is exported, the new plants will create a significant net emission reduction because of their beneficial impact on in-state generation.<sup>230</sup>

## *3. Water*

CPV will acquire its water supply from LMSC which gets its supply from the Rivanna River. Ms. Neeley, one of the public witnesses, was particularly knowledgeable about LMSC, its system capacity, and its service obligation to the Lake Monticello community. She raised concern with the capacity of LMSC to supply water to her community at full build-out.

Yet, the LMSC’s Virginia Water Protection Permit authorizes it to withdraw up to 400 million gallons of water per year, up to 2.576 million gallons per day, and up to 2,683 gallons per minute. Because of its “air-cooling” technology, CPV’s proposed Facility will normally intake water at a rate of only 63 gallons per minute, or 90,720 gallons per day, when in operation. These figures represent 2.3% and 3.5%, respectively, of the maximum withdrawal rates per minute and per day that are allowed to the LMSC. Mr. Broemmelsiek testified that even if the Facility were to operate as much as 24 hours per day, 365 days per year, at normal operating conditions (which he testified almost certainly will not occur), it would only intake approximately 33.58 million gallons of water per year, approximately 8% of the LMSC’s authorized annual withdrawal.<sup>231</sup>

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<sup>229</sup>*Id.* at 5.

<sup>230</sup>*Id.* at 6.

<sup>231</sup>Ex. 19, at 28-29.

Mr. Broemmelsiek explained that when the Lake Monticello community reaches full build-out, it will have approximately 4,800 equivalent residential connections, which amounts to total water use of 0.768 million gallons per day, or about 280 million gallons per year. Accordingly, Staff also agreed that the LMSC has ample water supply to serve the CPV Facility, the Lake Monticello community at full build-out, and the additional customers in a recently requested territory expansion even under the existing permits.<sup>232</sup> Very importantly, CPV has 77 days of water storage capability on-site, and therefore has also agreed to interruptible service. If LMSC needs to interrupt CPV to serve Lake Monticello or due to low flow in the Rivanna River, it can, and will, do so. I concur that this project will not adversely affect water supply.

#### 4. *DEQ Coordinated Review*

The coordinated environmental review produced 12 conditions recommended by DEQ to be incorporated into any CPCN granted to CPV. The recommendations are summarized as follows:<sup>233</sup>

- Comply with the conditions of permits and approvals listed in DEQ's report;
- Follow the practices recommended by DEQ to protect wetlands;
- Coordinate with the Department of Game and Inland Fisheries to provide wildlife observation opportunities for the public in the forested lands surrounding the Facility's site;
- Place the Bragg Cemetery and related structural remains under permanent easement;
- Follow the federal spill prevention, control, and countermeasures provisions in connection with handling or disposal of hazardous materials or wastes from the Facility;
- Conduct a long-term monitoring program of changes in pH and alkalinity at the Fluvanna Ruritan Lake;
- Follow the recommendations by the Department of Forestry to protect trees or groups of trees on the Facility's site from project impacts;
- Set up a Forestland Recovery Fund;
- Examine safety issues associated with construction traffic by conferring with officials of Fluvanna County and the Department of Transportation;
- Avoid land disturbance as part of the preliminary site preparation until all applicable approvals and permits, including the Erosion and Sediment Control Plan, have been issued by the applicable agencies;
- Consider developing an Environmental Management System and follow pollution prevention tips; and
- Use any pesticides or herbicides in strict accordance with manufacturers' recommendations.

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<sup>232</sup>*Id.* at 30.

<sup>233</sup>Ex. GLA-7, at 7-9; Appendix A at 3-4.

CPV agreed to meet each of those conditions. I find that they are reasonable and should be included.

## **F. Economic Development**

Mr. Sammons, the Fluvanna County Administrator, concluded that, given the negligible impact on air quality from the Facility, there should be no negative impact on the County's economic development from the operation of the Facility.<sup>234</sup>

Mr. Sammons also discussed in detail the financial benefits that will accrue to the County if the plant is built. According to Mr. Sammons, the County requires considerable capital and debt services to finance the needed expansion of the elementary school and high school, and the construction of a courthouse and other public buildings. Without substantial new private investment, the County will be unable to pay for these public service requirements. A portion of the new construction will result in \$4.1 million new debt annually, which alone would consume approximately half of the County's present real estate tax income for the current year. Mr. Sammons stated that the County must have a diversified local economy and substantial new tax revenue to sustain the growing locality.<sup>235</sup>

Mr. Sammons stated that CPV's presence in Fluvanna County will offset a significant amount of these costs. In addition to property taxes from the Facility, CPV agreed as a condition of its SUP to contribute \$18 million over the next 30 years into the Fluvanna County Special Capital Improvements and Debt Service Fund, with payments scheduled to begin in 2002. The Fund was designed to address the County's capital needs and to mitigate any concerns about the effects of the Facility on local services. The County's fiscal budget for 2003, recently adopted by the Board of Supervisors, allocated nearly \$400,000 from CPV to finance public safety facilities, emergency radio communications equipment, the Heritage Trail facilities, and local soccer fields.

Staff witness Carsley confirmed that the Facility would have positive net economic benefits for the County and surrounding area. CPV will pay approximately \$1.2 million in annual property taxes. Moreover, Mr. Carsley testified that the benefits will be achieved at little cost to the County.

## **G. Public Interest**

### **1. Control and Ownership**

Several of the public witnesses questioned the intent of CPV to actually develop and operate the proposed project. They accused the Applicant of attempting to acquire the necessary permits to construct and operate the Facility with the intent to sell those valuable rights to another developer unknown to the Commission or the community. They questioned whether another developer would honor the promises made by CPV to support the community.

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<sup>234</sup>Tr. at 137.

<sup>235</sup>*Id.* at 139-42.



In response, CPV explained that it intended to construct, own, and operate the Facility, but that it may sell a portion of the equity in CPV or a parent to provide some of the financing for the project. Mr. Broemmelsiek testified that Warburg Pincus, a majority shareholder in CPV Holdings, already has committed funds to other projects developed by CPV, Inc. could increase its equity participation in CPV to provide additional financing. Mr. Broemmelsiek also offered testimony that under another financing option CPV Inc. and could take on another equity investor experienced in running power plants.

CPV was created for the sole purpose of owning and operating the Cunningham Creek project. This ownership structure is the same as most, if not all, other independent generation projects that have come before the Commission in the past several years. That structure does allow the developer to sell a portion or even all of the equity in the single purpose limited liability company and effectively change the control of the facility without further Commission intervention or approval because the certificate issued by the Commission is issued in the name of the applicant.

The public witnesses thus raised a very reasonable concern. Since CPV is a newly formed single purpose entity it has no history or experience to support the required finding that its ownership and operation of a power plant in Virginia would have no adverse effect on the public interest. Staff and the Commission instead must consider the financial ability and technical experience of the parent, but here, Mr. Broemmelsiek has assured the Commission that CPV Inc. intends to maintain its ownership and control over this project, and that any transfer of equity interest in CPV will be limited to satisfying any remaining financing needs. His explanation is reasonable. The Commission should not encumber CPV's ability to finance this project. Moreover, as already discussed above, Staff witness Carsley recommended that CPV be required to advise the Commission of any changes in its business plan which would include changes in equity ownership. CPV agreed to this requirement. Thus, the Commission will be advised of any changes in equity ownership, and be able to assess the impact. If such information reveals a significant change in the character of the certificate holder, the Commission can evaluate whether further action is warranted.

## 2. Transportation

Other public witnesses complained that the Facility would adversely affect traffic in the County. Mr. Sammons, with the County, testified that the County addressed traffic concerns in the County SUP, and CPV must obtain approval of its construction traffic from the Virginia Department of Transportation. Mr. Broemmelsiek added that although the Facility will have no adverse effect on traffic, CPV accepted those traffic-related conditions in the SUP. Further, it will contribute funds to the County that are designated by the County for road improvement projects.

## 3. Emergency Response Plan for the Lake Monticello Community

Several public witnesses also raised concerns with public safety. Mr. Sammons and Ms. Wright, also with the County, stated that the County's public safety officials have been working with CPV's officials to develop an integrated emergency response plan. This plan addresses a range of topics, including standard operating procedures, on-site training exercises, spill containment, use of CPV's fire protection system, and third party safety inspections. According to

Mr. Sammons, CPV has an ongoing relationship with the County's Local Emergency Planning Committee and already is working to support the County's fire departments.<sup>236</sup>

Ms. Wright fully addressed the County's EOP. Clearly, a plan is in effect, and covers the Lake Monticello community and the CPV Facility. The County also is working with CPV to discuss emergency response exercises. This issue is being adequately addressed by the locality.

## **VII. FINDINGS AND RECOMMENDATIONS**

1. The project will have no adverse impact on the reliability of the Dominion Virginia Power electric system;
2. The current level of air quality in Fluvanna County is good, and is in attainment of all National Ambient Air Quality Standards;
3. The Applicant's cumulative impact analysis is reasonable;
4. The cumulative impact analysis adequately demonstrates that the emissions, when combined with the emissions from other existing or proposed facilities, will have no material adverse effect on air quality in Fluvanna County and the surrounding area;
5. The analyses discussed by the Applicant also demonstrate that the project will have no significant effect on ground level ozone in Fluvanna County and the surrounding area;
6. The emissions will have no material effect on economic development in Fluvanna County and the surrounding counties because the analyses show no significant deterioration of air quality and maintenance of levels well below the NAAQS;
7. The project will positively effect the local and regional economy;
8. The Facility will have no adverse effect on competition and could enhance competition at the wholesale level, however; CPV should be required to report any changes in its business plan, particularly as they relate to changes in equity ownership interests, to the Division of Economics and Finance so that the Commission can stay informed of market changes; and
9. The Facility will have no adverse impact on the public interest.

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<sup>236</sup>*Id.* at 137-39.

In conclusion, based on the evidence received in this case, and for the reasons set forth above, ***I RECOMMEND*** that the Commission:

1. ***GRANT*** the Applicant authority and a certificate of public convenience and necessity pursuant to § 56-580 D of the Code of Virginia to construct and operate an electric generation facility, and its associated facilities in Fluvanna County as described above and based upon the record developed herein;
2. ***DIRECT*** the Applicant to comply with the recommendations of the DEQ;
3. ***DIRECT*** CPV to report any changes in its business plan, including changes in equity ownership;
4. ***PROVIDE*** that the certificate will sunset if construction has not begun within two years from the date of a Commission final order granting approval of the CPV Cunningham Creek project;
5. ***PROVIDE*** that the certificate is conditioned on the receipt of all permits necessary to operate the Facility, and direct the Applicant to provide a complete list to the Division of Energy Regulation; and
6. ***DISMISS*** this case from the docket of active matters.

### **COMMENTS**

The parties are advised that any comments (Section 12.1-31 of the Code of Virginia and 5 VAC 5-20-120 C) to this Report must be filed with the Clerk of the Commission in writing, in an original and fifteen (15) copies, within twenty-one (21) days from the date hereof. The mailing address to which any such filing must be sent is Document Control Center, P.O. Box 2118, Richmond, Virginia 23218. Any party filing such comments shall attach a certificate to the foot of such document certifying that copies have been mailed or delivered to all counsel of record and any such party not represented by counsel.

Respectfully submitted,

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Deborah V. Ellenberg  
Chief Hearing Examiner